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AOR 037

From the Editor's Desk



In this issue, Brian Milligan presents a photographic essay on the Victorian Orchids of the Year for 2003, as decided by the judging panel of the Orchid Societies Council of Victoria (OSCOV). You will no doubt be impressed with the quality and variety of the winning entries. It would be of great interest to readers Australia and worldwide if other State bodies followed OSCOV's lead in actively promoting the elite plants they award. Sadly there has not been an official Australian Orchid Council award book — with photographs — for many years. Sometimes I wonder the true value of many of these awards if no one gets to see them, or even hear or read about them. Personally, I would like to see (and have promoted this view for years) that all details and images of State awards are showcased on their home website, with all national awards included within the Australian Orchid Council's website. Perhaps those who receive the awards (and shell out the money to fund the system) should put some pressure on the State and/or National body for this to happen. After all, one of the aims of these sites is for education and dissemination of information, and awards are quite important to a lot of orchid growers.

Gary Hart is a fine grower of a range of orchid genera, and he now has quite a score of awards and other championships to his name. In this issue Gary talks about the breeding that has been done with *Paphiopedilum* Winston Churchill, and showcases some of its progeny. Rudolf Jenny gives us an overview of the rare genus *Lacaena*, whilst Neil Minter presents a common sense and practical article on winter care for your orchids.

There has been lots of feedback and discussion on the articles we have recently published on the peat and perlite mix. Some growers are under the impression that sphagnum moss is no longer available, since the major supplier in Tasmania has closed down. Growers (like myself) who still use a lot of sphagnum moss to cultivate specific orchids, will be pleased to know that Easy Orchids at Woodburn, NSW (www.easy-orchids.com) are now importing and supplying top quality moss from New Zealand. I have used it, the moss is excellent and the plants love it. It is very "fluffy" and water retentive, with no rubbish (sticks, leaves etc), just pure moss. An article on this moss will appear in the next issue.

Well the first of the Orchid Fairs for 2004 are now behind us, and what a success they were. The Sydney International Orchid Fair at Castle Hill goes from strength to strength, and the sister event — the inaugural Victorian International Orchid Fair was outstanding, with many happy customers and vendors. There are even whispers of similar fairs happening in Adelaide and Brisbane in the future. In other news, the Orchid Society of New South Wales will be celebrating its 70th Birthday with a dinner on the 14th August 2004.

The Central Coast of New South Wales will host three orchid events over the coming months. The new Orchid Fair at Mingara (19-20 June) appears to have replaced the long-standing Peats Ridge Orchid Fair. There is a bit of confusion surrounding the two competing shows at Gosford. Firstly, the Gosford and District Orchid Society actually own the name "Gosford Orchid Spectacular" and hold their show (2-4 July) at Gosford Racecourse. The "Original Gosford & Australasian Orchid Spectacular", will be held (as it has for the past 14 years) at the Gosford Showground from 30 July to 1 August. No wonder the general public get confused! Advertisements for each of these events appear in this issue. Check them out if you are able to attend.

The orchid world lost one of the true ladies of the international fraternity with the passing of Rebecca Tyson Northen on 30th April 2004, at the age of 93. Rebecca will be most familiar to Australian readers as the author of the best-selling *Home Orchid Growing*, which has the distinction of being arguably the most reprinted popular orchid book. I had the pleasure of meeting Rebecca in California in 1998 and again in 2000 at the San Francisco Orchid Exposition, and recalled the many Australian orchid growers she had met at World Orchid Conferences and similar events. My strongest memory, apart from her being such a lovely person, was her eyes; they were the bluest I had ever seen. She will be missed, but her memory will live on.

David P. Banks

Editor, *Australian Orchid Review*
dpbanks@ozemail.com.au

OUR COVER



Victorian Species Orchid of the Year (excluding paphiopedilums) was *Masdevallia caudata* 'Kate' HCC/OSCOV, grown by Marilyn and Barry Larkin. Read the report by Brian Milligan in this issue. Photo: Barry Larkin



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Victorian Orchid of the Year was *Paphiopedilum micranthum* 'Gowrie' FCC/OSCOV, grown by Vic and Elaine Pearce. Photo: V. Pearce.



Victorian Orchids of the Year 2003

by Brian Milligan

The Orchid Societies Council of Victoria (OSCOV) introduced the Victorian Orchids of the Year competition in 1992. Photographs of all orchids that have received OSCOV awards in the current year are considered, together with any others submitted by Victorian growers. Success in this competition relies not only on growing an orchid of award quality but also on taking photographs of a similar standard. Ninety awards were granted in 2003 (one First Class Certificate, 10 Awards of Merit, 45 Highly Commended Certificates, 8 Awards of Distinction, 21 Cultural Certificates, 2 Awards of Quality and 3 Certificates of Botanic Merit); an additional ten entries were also received. The OSCOV Judging Panel met in February 2004, first to select the winners in the various categories and then to decide the overall winner.

Victorian Orchid of the Year for 2003 (sponsored by Castle Creek Orchids) was *Paphiopedilum micranthum* 'Gowrie' FCC/OSCOV, grown by Vic and Elaine Pearce. It also won the Victorian *Paphiopedilum* Species of the Year category, sponsored by the Stawell Orchid Society. Vic and Elaine will receive an OSCOV Gold Medal, the OSCOV Perpetual Trophy (an orig-

inal Syd Monkhouse painting of *Rossioglossum grande*), and a framed photographic print of their orchid (courtesy of Castle Creek Orchids). Vic and Elaine will be presented with these trophies at a dinner held in conjunction with the OSCOV Show at Collectors' Corner in August.

Bill and Jan Miles won the Victorian Cultural Certificate of the Year with a magnificent specimen plant of *Masdevallia* Cuzco Gold 'Beenak' HCC/OSCOV. They will receive a silver medal and the OSCOV-sponsored Gunter Haar Memorial Trophy (a large framed photographic print of their orchid) at the presentation dinner. The winners of all other categories will also receive framed photographic prints of their orchids and OSCOV medallions at the same dinner.

The Australian Native Orchid Species of the Year (sponsored by the Yarra Valley Orchid Society) was *Dendrobium speciosum* 'Harry Klose' AM/OSCOV, grown by Peter and Sheryl Adams. Australian Native Hybrid of the Year (sponsored by the Mornington Peninsula Orchid Society) was *Sarcochilus* Burgundy on Ice 'Rose' HCC/OSCOV, grown by Robert and Rosalie Harrap of Bairnsdale.

Masdevallia Cuzco Gold 'Beenak' CC/OSCOV was the winner of the Gunter Haar Memorial Trophy for the Victorian Cultural Certificate of the Year. Grown by Bill and Jan Miles, this lovely specimen plant carried 126 flowers and 52 buds. Photo: M. Matthews.



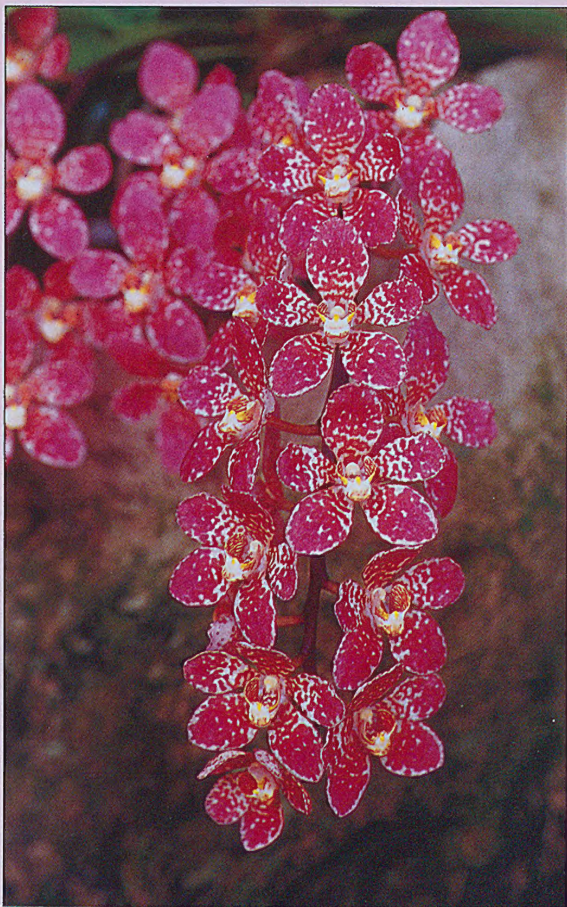


The Australian Native Orchid Species of the Year, chosen from ten entries, was *Dendrobium speciosum* 'Harry Klose' AM/OSCOV, grown by Peter and Sheryl Adams. Photo: P. Adams.





Sarcocylus Burgundy on Ice 'Rose' HCC/OSCOV, grown by Robert and Rosalie Harrap of Bairnsdale, was the Australian Native Orchid Hybrid of the Year. It was judged best of 14 entries in this category. Photo: A. Stuivenberg.



The Victorian Cattleya of the Year (sponsored by the Mid-Murray Orchid Club) was *Sophrholaeliocattleya* Mahalo Jack 'Coppin' HCC/OSCOV, grown by Ron and Pauline Coppin of Stawell. Victorian *Cymbidium* of the Year (sponsored by the *Cymbidium* Orchid Society of Victoria) was *Cymbidium* Kimberley Winter 'Sunbound' AM/OSCOV, grown by Otto Wende of Moe, while the Victorian *Paphiopedilum* Hybrid of the Year (sponsored by the Ballarat Orchid Society) was *Paphiopedilum* S. Gratrix 'Broderick' HCC/OSCOV, grown by

Paphiopedilum S. Gratrix 'Broderick' HCC/OSCOV, grown by John and Barbara Welsh (also from Stawell) was both Victorian *Paphiopedilum* Hybrid of the Year and Victorian Seedling of the Year; there were 21 entries in the latter category. Photo: M. Matthews.





Slc. Mahalo Jack 'Coppin' HCC/OSCOV, grown by Ron and Pauline Coppin of Stawell, was Victorian Cattleya of the Year. Photo: M. Matthews.

Victorian Species Orchid of the Year (excluding paphiopedilums) was *Masdevallia caudata* 'Kate' HCC/OSCOV, grown by Marilyn and Barry Larkin. Photo: B. Larkin.





Otto Wende of Moe won the trophy for Victorian *Cymbidium* of the Year with *Cymbidium* Kimberley Winter 'Sunbound' AM/OSCOV. Photo: T. Poulton.

John and Barbara Welsh of Stawell. This paphiopedilum also won the category for Victorian Seedling of the Year (sponsored by Atlantis Orchids as the Harold and Florence Coker Award). Victorian *Masdevallia* of the Year (sponsored by the Warrnambool and District Orchid Society) was *Masdevallia* Red Sun 'Cornish' HCC/OSCOV, grown Alan and Eileen Reidy from Warburton. It was certainly the Year of the Country Grower, as (with only one significant exception) all the above trophies were won by growers from country Victoria!

Clive and Agi Halls of Mt. Beenak Orchids won the trophy for the Victorian *Odontoglossum* of the Year with *Odontioda* Memoria June Appleby 'Beenak' HCC/OSCOV. Photo: C. Halls.





The Victorian Award of Distinction of the Year for 2003, chosen from eight entries, was *Doriataenopsis* Taisuco Firebird 'Paradisias' AD/OSCOV, grown by Paradisia Orchids. Photo: S. Early.

Victorian Species Orchid of the Year (sponsored by the Orchid Species Society of Victoria) was *Masdevallia caudata* 'Kate' HCC/OSCOV, grown by OSCOV past-President Barry Larkin and his wife Marilyn. They may live out in 'the sticks' but they're close enough to Melbourne for me to count them as city growers! It was gratifying to see Bill Mather, secretary of the OSCOV Judging Panel since its inception in 1992, take out the Victorian Any Other Hybrid of the Year (sponsored by the North East Melbourne Orchid Society) with *Ascocenda* Viewbank 'Sally Rosalind' HCC/OSCOV.

The Victorian *Odontoglossum* of the Year (sponsored by the Bendigo Orchid Club) was *Odontioda* Memoria June Appleby

'Beenak' HCC/OSCOV, grown by Clive and Agi Halls of Mt. Beenak Orchids. Last but not least was the Victorian Award of Quality of the Year, sponsored by the Ringwood Orchid Society). John Martin and Andrew Francis of Castle Creek Orchids received two AQ/OSCOV awards during the year, both for *Paphiopedilum*s. The overall winner was a group of *Paphiopedilum sukhakulii* seedlings that included *Paphiopedilum sukhakulii* 'Merrigum' HCC/OSCOV. ■

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Ascocenda Viewbank 'Sallyann Rosalind' HCC/OSCOV, grown and photographed by Bill Mather, was Victorian Any Other Hybrid of the Year.



Paphiopedilum Winston Churchill

Text and photos by Gary Hart

It is true of most orchid genera that occasionally a single pivotal hybrid is made that go on to influence breeding for generations to come. *Paphiopedilum* Winston Churchill, registered by Stuart Low Co. of England in 1951 is one such hybrid. As its name implies it was named in honour of British wartime Prime Minister and statesman Winston Churchill from a crossing of *Paphiopedilum* Eridge and *Paphiopedilum* Hampton. These two parents appear in other registered hybrids, but none to rival the famous *Paphiopedilum* Winston Churchill they created.

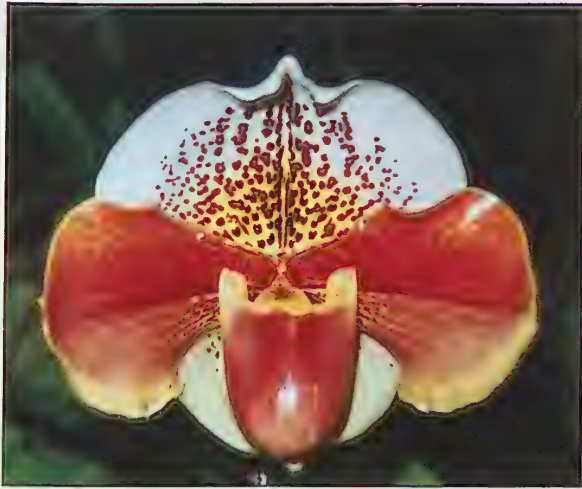
Orchid enthusiasts around the world often comment about the impact *Paphiopedilum* Winston Churchill had on American *Paphiopedilum* breeding. This is true it did, but it must be emphasised that this is an English hybrid that was moved to America during World War II. Like so many orchid genera, *Paphiopedilum* stud stock was moved to the USA during World War II to avoid being wiped out by German bombing. There was also the restriction on fuel for any purpose other than providing food. In England solid fuel was used to fire most glasshouse boilers. How many hybrids of the cross were ever raised is unknown, but two outstanding cultivars, the spotted 'Indomitable' FCC/AOS and the red 'Redoubtable' FCC/AOS emerged to dominate red and spotted standard *Paphiopedilum* parentage for decades to follow. They were and are so valuable as stud breeding plants; they are still widely used today almost sixty years after the hybrid was originally made. Numerous other cultivars including 'Invincible' and 'Atlas' have been used extensively as breed-



Paphiopedilum Winston Churchill 'Indomitable' (plant G. Hart)



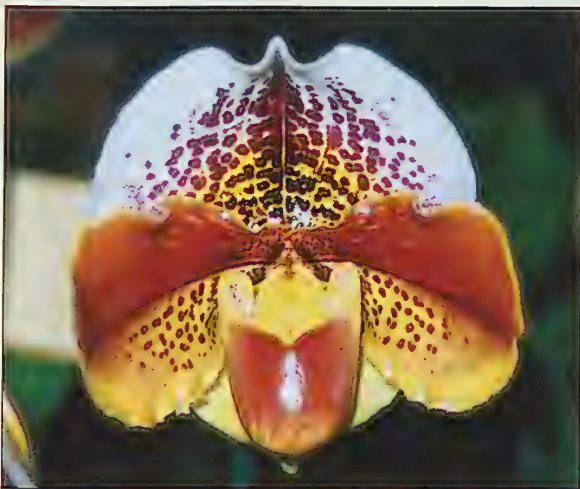
Paphiopedilum Winston Churchill 'Redoubtable' (plant G. Hart)



Paphiopedilum Mem. Jack Carrett (plant G. Hart)



Paphiopedilum Global Harmony 'Classic' (plant & photo J. McCubbin)



Paphiopedilum (Sunny Tears x Winston Churchill) (plant S.T. Ho)



Paphiopedilum Winstear 'Marie' (plant & photo J. McCubbin)



Paphiopedilum Global Harmony 'Oasis' (plant & photo J. McCubbin)



Paphiopedilum Warrawong 'Kev' (plant & photo J. McCubbin)

ing plants through the decades. Several Winston Churchill cultivars are tetraploids and as such exert a great and lasting influence on their progeny. The cross of *Paphiopedilum* Winston Churchill has been remade several times but to my knowledge none of the progeny have surpassed the original.

The most famous cultivars "Redoubtable" and "Indomitable" are very fertile parents but need careful matting to avoid results that can be somewhat indiscriminate. i.e. the rather small spotting of 'Indomitable' can be so overwhelming that a "brushed/muddy" effect is achieved. A partner with dominant colour and spots is required; such as *Paphiopedilum* Small World (Ernest E Platt x Blendia) This hybrid was made in the early 1950's by the famous *Paphiopedilum* breeder Ronnie Ratcliffe. Bred to *Paphiopedilum* Winston Churchill "Indomitable" it produces *Paphiopedilum* British Bulldog, (1979) a prime example of a wonderful *Paphiopedilum* Winston Churchill hybrid. When we look at Sanders List of Hybrids it shows that over 300 hybrids have been registered from this grex to date. This number will surely grow, as many of today's *Paphiopedilum* catalogues still have seedlings available with *Paphiopedilum* Winston Churchill as one of the parents. The list is too long to produce the number of *Paphiopedilum* Winston Churchill hybrids that have gone on to become superior breeding plants, gained awards world wide, and have been show champions, in their own right. In the world of Orchids, *Paphiopedilum* Winston Churchill must stand as one of the most pivotally important hybrids ever made. *Paphiopedilum* breeders around the world look forward to seeing its name continue to appear in breeding circles for years to come and appreciate the outstanding progeny it continues to produce.

Sincere thanks for assistance with this article to Paul Phillips of Ratcliffe Orchids, Jim McCubbin and The Australian *Paphiopedilum* Society - (TAPS).

Gary Hart

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ADP 172



Plate of *Lacaena bicolor* from Curtis's Botanical Magazine from 1958 (Vol.172:t.330).

The Genus *Lacaena* Lindley

by Rudolf Jenny

Introduction:

The genus *Lacaena* consists of two species, with the Type species, *Lacaena bicolor*, described by John LINDLEY 1843 in Edwards's Botanical Register with a short note and without any illustration (Lindley 1843). In 1844 LINDLEY published – again in Edwards's Botanical Register – a more detailed description of *Lacaena bicolor*, together with a beautiful drawing and more details about its origin (Lindley, 1844). LINDLEY's plant was collected by Theodor HARTWEG, collector in Central America for the Royal Horticultural Society, in the "mountains of Salama, in the province of Vera Paz, also near the village of Sunil, near Quetzaltenango in Guatemala, growing on rocks, at an elevation of about 7000 feet above the sea". Theodor HARTWEG published in the "Allgemeine Gartenzeitung" 1847 a diary of his travels in Central America between 1836 and 1843 and mentioned also his finding of *Lacaena bicolor* (Hartweg, 1847). Together with many other plants, HARTWEG sent a living specimen of *Lacaena bicolor* to the garden of the Royal Horticultural Society in Chiswick, England. This plant flowered for the first time in May 1843 and was – following LINDLEY's own words – in very bad shape, 1854 LEMAIRE wrote that the type specimen of *Lacaena bicolor* in the collection at Chiswick was no longer alive.

Today *Lacaena bicolor* is rarely seen in cultivation, but in the 19th century it was represented at least for a short time in quite a few orchid collections in Europe. In 1845 DON reported *Lacaena bicolor* from the collection of the Cambridge Botanical Garden (Don, 1845), 1849 we find a note about a collection of Orchids by WARSCWICZ in Gardeners' Chronicle, exported from Central America to SKINNER in England and distributed by him, including *Lacaena bicolor* without exact location (Anonymous, 1849). 1852 a plant of unknown origin was shown at the "Ausstellung des Vereins zur Beförderung des Gartenbaus" in Berlin (Dietrich, 1852) and 1855 a list of the famous collection of Albrecht Ludwig KEFERSTEIN – the genus *Kefersteinia* was named by REICHENBACH after him – was published by LOEBEL. In this list we find also *Lacaena bicolor*, flowering in May 1855 (Loebel, 1855). 1907 a plant of *Lacaena bicolor* flowered in the collection of Kew (Anonymous, 1907). The species was also listed in the catalogues of the famous collections of Consul SCHILLER and Senator JENISCH in Germany. In many of the lexica about Orchids published in the 19th century, we find *Lacaena* at least mentioned as genus (Baxter, 1850; Beer, 1854; Du Puydt, 1880; Duchartre 1857, and Stein, 1892), this seems to be prove for the fact that *Lacaena* was then far more widely distributed in collections than today.

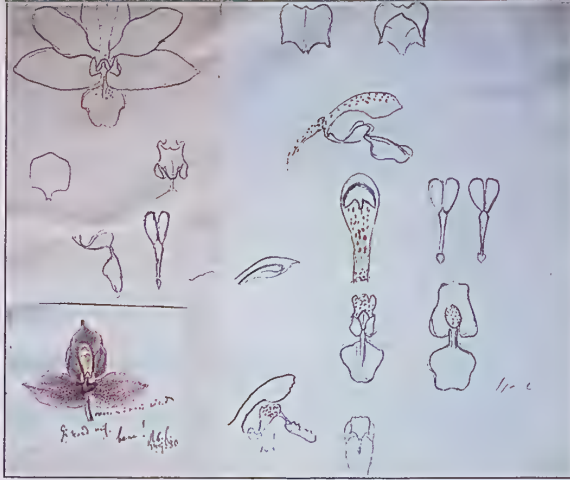
In 1958 a plate of *Lacaena bicolor* was published by SUMMERHAYES in Curtis's Botanical Magazine (Summerhayes, 1958). SUMMERHAYES wrote: "The flowers are of considerably variability, sepals and petals varying from white, cream, of greenish yellow, while the amount of purple markings on the lip is very variable. In some forms there is a large central purple blotch with a narrow pale margin, whereas in others the purple spotting may be entirely lacking, the so-called variety alba". The author lists as synonyms for *Lacaena bicolor* the following taxa: *Lacaena bicolor* var. *glabrata* Lemaire, *Lacaena bicolor* var. *alba* Rolfe, *Peristeria longiscapa* Rich & Gal. and *Acinetia wrightii* J.Fraser

1897 KRAENZLIN described *Lueddemannia sanderiana* based on a specimen imported by SANDER supposedly from Colombia (Kraenzlin 1897). Following KRAENZLIN's description, *Lueddemannia sanderiana* is identical with *Lacaena bicolor*, although this species never before and after was collected in Colombia. Most probably the information about its origin was wrong, either by mistake or by intention. Nurseries tried to keep the origin of valuable new species as a secret in order to avoid competitors obtaining the same species. When CHRISTENSON listed in 1994 the existing herbarium specimens of KRAENZLIN at the Botanical Garden Hamburg, he didn't mention the type of *Lueddemannia sanderiana*. It is possible that the type was in Berlin and was – together with SCHLECHTER's orchid herbarium – destroyed during the war in 1943 (Christenson, 1994).

On June 21th 1910, an inflorescence of a plant labelled *Lueddemannia sanderiana alba*, was presented by F.W.MOORE – keeper of the Royal Botanic Garden Glasnevin – to the Royal Horticultural Society in London. ROLFE recognized the inflorescence as *Lacaena bicolor* without the usual purple markings on the lip and named it *Lacaena bicolor alba*. He was not sure whether the plant came from the same importation by SANDER from Colombia as the plant KRAENZLIN had when he described *Lueddemannia sanderiana* (Rolfe, 1910).

Painting of *Lacaena spectabilis* from the herbarium of REICHENBACH (no.44739) in Vienna done by GIROUD.





Drawing of *Lacaena spectabilis* from the herbarium of REICHENBACH (no.44743) in Vienna.

Lacaena bicolor is also mentioned in the catalogue of the nursery SANDER, together with two varieties: *Lacaena bicolor* var. *alba* and *Lacaena bicolor* var. *sanderiana* (Sander, 1927). According to the catalogue, both varieties were from Colombia. It is probable that SANDER's *Lacaena bicolor* var. *sanderiana* was based on KRAENZLIN's *Lueddemannia sanderiana* from 1879, which is considered to be a synonym for *Lacaena bicolor* and which was – according to KRAENZLIN – also imported by SANDER from Colombia.

WRIGHT published 1959 a first illustration of *Lacaena bicolor* var. *sanderiana* (Wright, 1959), the plant was collected by Marie GUDEWIL de BARON during an expedition through northern Puebla in Mexico in March 1959 and started an inflorescence in the same year in May in her collection. The flowers opened in June in the greenhouse of N.P.WRIGHT. The author mentioned SANDER's catalogue as source for the name.

Most probably *Lacaena bicolor* var. *alba* and *Lacaena bicolor* var. *sanderiana* are forms of *Lacaena bicolor* without the red markings on the lip, but still with a hairy callus, both taxa should be treated as formae, separated from the species only by its different coloration. The situation is different with *Lacaena bicolor* var. *glabrata* Lemaire, this variety could be identical with *Lacaena nicaraguensis* L.O.Williams or with the natural hybrid between *Lacaena bicolor* and *Lacaena spectabilis*. In L'illustration Horticole, Charles LEMAIRE described and illustrated 1854 *Lacaena bicolor* var. *glabrata* (Lemaire 1854). The description was based on a plant imported from Mexico by TONEL from the nursery of VERSCHAFFELT in Belgium. LEMAIRE's variety had an almost entirely glabrous lip. In the same volume of L'illustration Horticole we find the short information that VERSCHAFFELT exhibited the plant at the horticulture show at Malines, he got an award of distinction for *Lacaena bicolor* var. *glabrata*.

Another synonym for *Lacaena bicolor* is *Peristeria longiscapa*. The first mentioning of this taxon was published 1844 in an article with the title Monographie des Orchidees Mexicaines, précédée de considérations générales sur la végétation de Mexique et sur les diverses stations ou croissent les espèces d'Orchidées mexicaines by Achille RICHARD and Henry Guillaume GALEOTTI (Richard & Galeotti, 1844) in Comptes rendus hebdomadaires des Séances de l'Académie des Sciences. The two authors published a list of plants collected in Mexico by GALEOTTI and *Peristeria longiscapa* was listed as name without any further description. The very short but formal description was published by the authors 1845 in Annales de Sciences Naturelles (Richard & Galeotti, 1845). In spite of the fact that the second publication was younger and that at this time the validity of a plant description was not depending on a Latin diagnosis or a type specimen, Index Kewensis mentions the second description as valid and not the first one from 1844. Anyway, from the

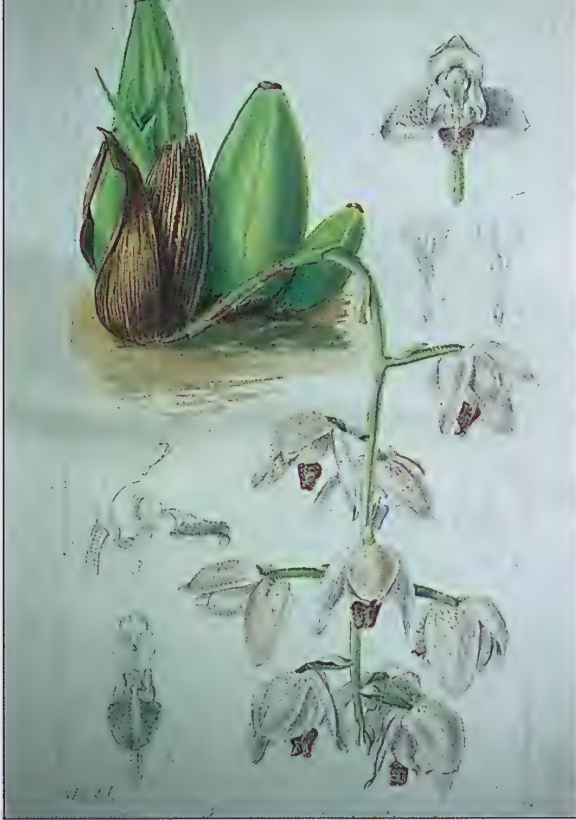
copy of a drawing of the plant – mentioned as plate 30 in the description of 1845 – kept in the herbarium of REICHENBACH in Vienna, it is obvious that RICHARD's and GALEOTTI's *Peristeria longiscapa* is a synonym of *Lacaena bicolor*. In 1851 REICHENBACH wrote that he wasn't able to find any differences between *Lacaena bicolor* and *Peristeria longiscapa* A.Rich. & Gal. (Reichenbach, 1851), one year later he mentioned *Peristeria longiscapa* A.Rich. & Gal. again in connection with the description of *Acineta sella-turcica* (Reichenbach, 1852) but he did not move the species to the genus *Acineta* as SOTO claimed (Soto, 2003).

Two names in the genus *Acineta* are defined as synonyms of *Lacaena bicolor* by many authors. The first one is *Acineta hrubyana* Rchb.f., described 1882 in Gardeners' Chronicle and based on a plant originally imported by SANDER from New Grenada and cultivated by Baron HRUBY de GELENYI of Peckar in Bohemia (Reichenbach, 1882). The type of *Acineta hrubyana* in REICHENBACH's herbarium (no.44912) consists of only two dried flowers but also a drawing from REICHENBACH. This drawing shows very clearly that *Acineta hrubyana* is certainly a true *Acineta* and cannot be recognized as synonym of *Lacaena bicolor*. It is questionable whether *Acineta hrubyana* is a synonym of another *Acineta* species. Also Rudolf SCHLECHTER classified *Acineta hrubyana* as real *Acineta* in his monograph of the genus, published 1917 in Orchis (Schlechter, 1917). At this time the herbarium of REICHENBACH – locked for 25 years after REICHENBACH's last will – was re-opened and SCHLECHTER had access to the type material of all *Acinetas* described by REICHENBACH. Plants declared as *Acineta hrubyana* were not that seldom seen in cultivation, 1907 a plant from the collection of Charlesworth & Co. was presented to the Orchid Committee of the Royal Horticultural Society in London. It is not clear why and when *Lacaena bicolor* and *Acineta hrubyana* were mixed together.

Acineta wrightii, the other *Acineta* name often mentioned, as synonym of *Lacaena bicolor* was first mentioned 1888 in the

Painting of *Lacaena bicolor* from Edwards's Botanical Register from 1844 (Vol.30; t.50).





Painting of *Lacaena spectabilis* from Curtis's Botanical Magazine from 1880 (Vol.106:t.6516).

famous *Lindenia* by an unknown author (Anonymous, 1888). After Index Kewensis the first description was published one year later in *Gardening World* in by J.FRASER (Fraser, 1889). The description was based on a plant imported as *Stanhopea* from Mexico by E.H.WATTS of Devonshire, Chiswick, in 1888. The type of FRAZER's *Acineta wrightii* is in Kew, together with a letter from FRASER to Robert Allen ROLFE explaining the origin of the dried material. Based on the type-material it is very clear that *Acineta wrightii* is a real synonym of *Lacaena bicolor*. SCHLECHTER did not mention *Acineta wrightii* in his monographic treatment of *Acineta*, published 1917 in *Orchis* (Schlechter, 1917).

The second species of the Genus, *Lacaena spectabilis* showed up for the first time in the collection of G.NAUEN in Berlin. NAUEN was a rich factory owner and had a large orchid collection; his gardener was Friedrich A.H.GIREOUD -REICHENBACH named *Brassia gireoudiana* after him. Following KLOTZSCH, NAUEN's plants were collected by Josef von WARSCEWICZ in 1850 in Guatemala. The information about the origin from Guatemala is very doubtful, the species was after WARSCEWICZ never collected again in this country and WARSCEWICZ travelled also through Costa Rica. KLOTZSCH described 1853 – based on NAUEN's plants – the new genus *Nauenia* with *Nauenia spectabilis* as the Type species (Klotzsch, 1853). KLOTZSCH was aware of the existence of the genus *Lacaena*, he put his new genus in between *Lacaena* and *Houlletia*. Certainly REICHENBACH knew KLOTZSCH's *Nauenia spectabilis* when he described *Lacaena spectabilis* 1854 in *Bonplandia*, that was the reason why he used the same species name (epithet), but he did not mention KLOTZSCH as first author. REICHENBACH's description was in fact a recombination and not a new description, the correct writing of the species is therefore *Lacaena spectabilis* (Klotzsch) Rchb.f. In REICHENBACH's herbarium there is one specimen with material from NAUEN. No.44742 is marked "*Nauenia spectabilis* Kl.; Central-America, Warscewicz, ex caldaris Nauenii, June 9th



Drawing of *Peristeria longiscape*, Herbarium REICHENBACH.

1853". This specimen should be declared as type of *Nauenia* (as genus) and *Nauenia spectabilis* because either KLOTZSCH's type was 1943 destroyed in Berlin and the specimen 44742 is the only remaining material from NAUEN's plants, or 44742 is KLOTZSCH's original type specimen itself. Also in REICHENBACH's herbarium we find a perfect watercolour painting (no.44739) of the species, done by GIREOUD, NAUEN's gardener, and most probably after the very same plant as used originally by KLOTZSCH as type for *Nauenia*. REICHENBACH repeated his description of *Lacaena spectabilis* in his *Beitraege zu einer Orchideenkunde Central-Amerika's* in 1866, again the description was based on material from NAUEN's collection, but this time REICHENBACH mentioned the name KLOTZSCH as author (Reichenbach, 1866).

1880 Joseph Dalton HOOKER described *Lacaena spectabilis* together with an illustration in Curtis's Botanical Magazine (Hooker, 1880). The plate was made after a plant sent to Kew by Hermann WENDLAND from the Royal Gardens of Herrenhausen (today Herrenhäuser Gärten in Hannover, Germany). It is not clear whether the plant was originally collected by WENDLAND himself during his travel through Central America or not. Probably WENDLAND came back from Central America with a few plants of *Lacaena spectabilis*, E.ENDER reports 1882 that the Royal Botanical Gardens in Berlin received also plants from WENDLAND (Ender, 1882). Although the species was up to today always a rare gem in collections, it showed up from time to time.

ROLFE described 1896 the species based on a plant flowered in the Kew collection in the same year (Rolfe, 1896), O'BRIEN mentioned 1897 in *Gardeners' Chronicle* an inflorescence of *Lacaena spectabilis* from a plant in cultivation with Frau Ida BRANDT in Zuerich, Switzerland, the plant came as *Houlletia* from Chiriqui in her collection (O'Brien, 1897). In 1965 Clarence HORICH wrote in *Die Orchidee* about the rediscovery of *Lacaena spectabilis* in Costa Rica, he collected the species together with other members of the subtribe *Gongorinae* without recognizing it as *Lacaena*. Two plants flowered later on in culture at the Missouri Botanical Garden and more by accident HORICH was informed that he had collected *Lacaena*

spectabilis. After that it took HORICH more than 2 years to rediscover the species, his article from 1965 contained the first published colour photograph of *Lacaena spectabilis* (Horich, 1965).

Lacaena grandis was published 1928 by KRAENZLIN, based on a plant collected in the Mapiri-area in Bolivia by O.BUCHTIEN (Kraenzlin 1928). The type of this species is still in the herbarium of the Botanical Garden Hamburg in Germany. *Lacaena grandis* would be the only species of *Lacaena* from South America and with erect inflorescences. In several check-lists of the Orchidaceae of Bolivia *Lacaena grandis* is mentioned, so by FOSTER in 1928 (Foster, 1928) and 1993 by HASHIMOTO (Hashimoto, 1993). Most probably both authors never saw the plant but compiled their list just based on literature. At least HASHIMOTO published his list more than 30 years after GARAY's recombination in 1958. Based on an isotype of BUCHTIEN's original collection, kept in the US National Herbarium, GARAY identified KRAENZLIN's *Lacaena grandis* as a member of the section *Lindleyella* of the genus *Bifrenaria*. He published the recombination to *Bifrenaria grandis* (Kraenzlin) Garay in Botanical Museum Leaflets in 1958, unfortunately without any illustration (Garay, 1958). 1982, in *Icones Plantarum Tropicarum*, a first illustration of GARAY's *Bifrenaria grandis* was published by C.H.DODSON & R.VASQUEZ (Dodson & Vasquez, 1982).

L.O.WILLIAMS described *Lacaena nicaraguensis* in 1964 in *Fieldiana Botany*, based on a plant collected by HELLER in May 1962 at the base of Pena Blanca, Cordillera Central de Nicaragua, 3500 feet alt (Williams, 1964). The type of WILLIAMS' species, together with a description and a drawing by HELLER (no.2731) is in the Chicago Natural History Museum. A note on HELLER's description says: "every authority with whom the writer has talked regarding this collection is in agreement that this is a new species". According to the description, the species seems to be intermediate between *Lacaena spectabilis* and *Lacaena bicolor*. The distribution area of *Lacaena nicaraguensis* is in the overlapping distribution areas of the other two species and the plant – after WILLIAMS' description and HELLER's drawing – seems to be intermediate between *Lacaena spectabilis* (south of Nicaragua) and *Lacaena bicolor* (north of Nicaragua), GERLACH wrote that he could imagine that *Lacaena nicaraguensis* would be a natural hybrid between the other two species (Gerlach, 1999).

Etymology

Lacaena after Lakaina, named for Helena of Troy who was worshiped as Lakaina in Lakonia. Another interpretation is that the name is based on the greek word for cleft, according to the distinctive division of epichile and hypochile. LINDLEY himself mentioned both explanations (Lindley, 1844)

Lueddemannia after Gustav Adolph LUEDDEMANN (1821 – 1884), gardener with PESCATORE at Chateau de la Celle, St.Cloud.

Drawing of *Acineta hrubyana* on the type sheet (no.44912) in the herbarium REICHENBACH and letter from Baron HRUBY.



Lacaena bicolor, single flower Photo: Ron Parsons.

Nauenia after G.NAUEN, factory-owner and orchid-enthusiast in Berlin, his gardener Friedrich A.H.GIREOUD succeeded to flower the first plant of *Lacaena spectabilis* in NAUEN's collection.

sanderiana after the orchid nursery SANDER in England and Belgium where the first plant flowered.

alba for white

glabra for glabrous or without hairs

longiscapa after the long inflorescence

spectabilis for considerable, after the flowers

nicaraguensis from Nicaragua

grandis for large, named for the size and form of the lip

hrubyana after Baron Hruby de Geleny of Peckar in Bohemia, owner of a large Orchid collection.

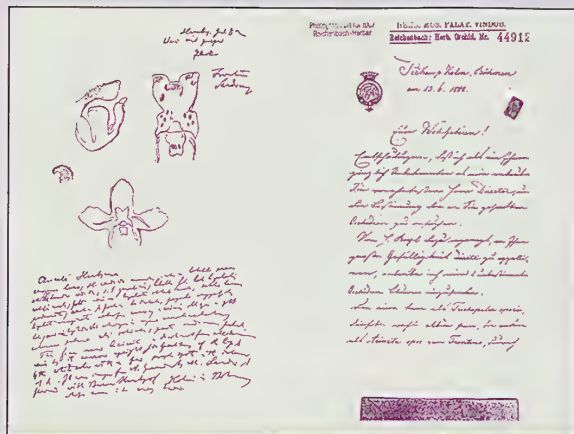
wrightii after WRIGHT, gardener with E.H.WATTS

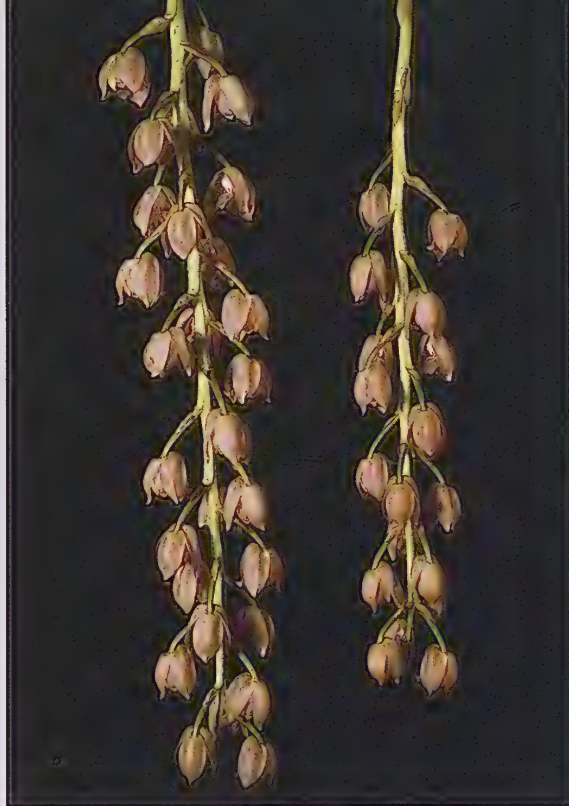
Pollination

Both species are very seldom seen in culture and are rather seldom collected, so it is obvious why we have only relatively little information about its pollination ecology. Both species and also the putative natural hybrid *Lacaena nicaraguensis* are pollinated by male *Euglossinae* bees. In an early attempt to investigate the pollination of orchids by bees published 1966 by VOGEL also *Lacaena* is mentioned, although without any further details (Vogel, 1966). The first "real" information about the pollinators of *Lacaena* is from DRESSLER (Dressler, 1967), he mentioned for *Lacaena spectabilis* *Euglossa maculilabris* as pollinator and later for *Lacaena bicolor* *Euglossa* cf. *caerulescens*. The same information was repeated several times by different authors (Dodson, 1967; Dressler, 1968, Williams, 1982). Fact is that all this details are based on a very few field observations and therefore may be incomplete. Drawings of the pollinaria of *Lacaena* were published by DRESSLER and DODSON (Dressler, 1968; Dressler, 1976; Dressler, 1977).

The flowers in all *Lacaenas* are pendent with an almost vertical lip, the bees tries to reach the fragrance sources (osmophores) at the base of the callus on the lip and by falling out of the flowers, the pollinarium on the top of the column is removed and/or the flower will become pollinated. The pollinaria are transported by the bee between its head and prothorax.

The first information about the composition of the fragrance of *Lacaena bicolor* was published 1991 by GERLACH and SCHILL (Gerlach & Schill, 1991). Such analysis have to be done with a Gaschromatograph-Massspectrometer, this is a very sophisticated analyser and is usually used in a lab but not in the field. With this it's clear that a cultivated plant in flower is needed to trap the fragrance and to analyse it. Its extremely difficult to identify the active pollinator based only on fragrance analysis of cultivated single plant specimens and without any extended field observations. In the case of *Lacaena bicolor* the analysis by GERLACH and SCHILL shows 6 known and another 6 non-identified and unknown compounds. The compounds are 1.8-cineole (21%), cymene (4%), limonene (2%),





Inflorescence of *Lacaena bicolor* Photo: G.Preissel.

alpha-pinene (2%), beta-pinene (4%), alpha-thujene (7%), unknown (5%, 4%, 22%, 12%, 3%, 5%). Main compound seems to be 1.8-cineole and one of the unknown compounds (22%). All compounds are monoterpenes, especially 1.8-Cineole and the two pinene isomers are known from many other members of the subtribe *Stanhopeinae*. As in the case of the field observations of pollinators, more work in the fragrance analysis would have to be done. With more information it would be probably possible to find evidence for the assumption that *Lacaena nicaraguensis* could be a natural hybrid between the two established species.

Systematics

Lacaena belongs very clearly to the subtribe *Stanhopeinae*, the next allied genera are *Acineta*, *Vasquezia* and *Lueddemannia*. This classification was up to about 1990 based on pure morphological features, fortunately enough molecular analysis showed almost exactly the same picture (Whitten, Williams & Chase, 2000). Results of investigations of *Lacaena spectabilis* (matK, trnL-F, ITS nrDNA) are clearly supporting the morphological approach.

In 1995 SZLACHETKO separated 5 genera from the *Stanhopeinae* as own subtribe *Coeliopsisinae* with the genera *Coeliopsis*, *Lycomorium*, *Peristeria*, *Lacaena* and *Lueddemannia* (Szlachetko, 1995). In an appendix (erratum) to this publication the author revised his decision and left *Lacaena* and *Lueddemannia* in the old subtribe *Stanhopeinae*.

Taxonomy

Acineta wrightii J.Fraser, Gardening World 1889:673, Synonym of *Lacaena bicolor*

Bifrenaria grandis (Kraenzlin) Garay, Botanical Museum Leaflets Harvard University 18:208.1958

Lacaena bicolor Lindley, Edwards's Botanical Register 29:1843.misc.68

Lacaena bicolor var. *alba* Rolfe, Orchid Review 18:1910.208, Synonym of *Lacaena bicolor*

Lacaena bicolor var. *glabrata* Lemaire, L'illustration



Flowers of *Lacaena spectabilis* Photo: G.Preissel.

Horticole 1:1854.t.33 & misc.56, Synonym of *Lacaena nicaraguensis* ??

Lacaena bicolor var. *sanderiana* hort., Sander's Orchid Guide rev.Ed.:1927.231, Synonym of *Lacaena bicolor*

Lacaena grandis Kraenzlin, Feddes Repertorium 25:1928.25

Basionym of *Bifrenaria grandis*

Lacaena nicaraguensis L.O.Williams, Fieldiana Botany 31:1964.41

Lacaena spectabilis Rchb.f., Bonplandia 2:1854.92

Lueddemannia sanderiana Kraenzlin, Gardeners' Chronicle ser.3.22:1879.138, Synonym of *Lacaena bicolor*

Nauenia spectabilis Klotzsch, Otto & Dietrichs Allgemeine Gartenzeitung 21:1853.193, Synonym of *Lacaena spectabilis*

Peristeria longiscapa A.Richard & H.Galeotti, Annales des Sciences Naturelles ser.4,3:1845.25, Synonym of *Lacaena bicolor*

Inflorescence of *Lacaena spectabilis* Photo: G.Preissel.





Lacaena bicolor var. *glabrata* from L'illustration Horticole (Vol.1, 1854, t.33) Photo: DOG (Scan).

Distribution

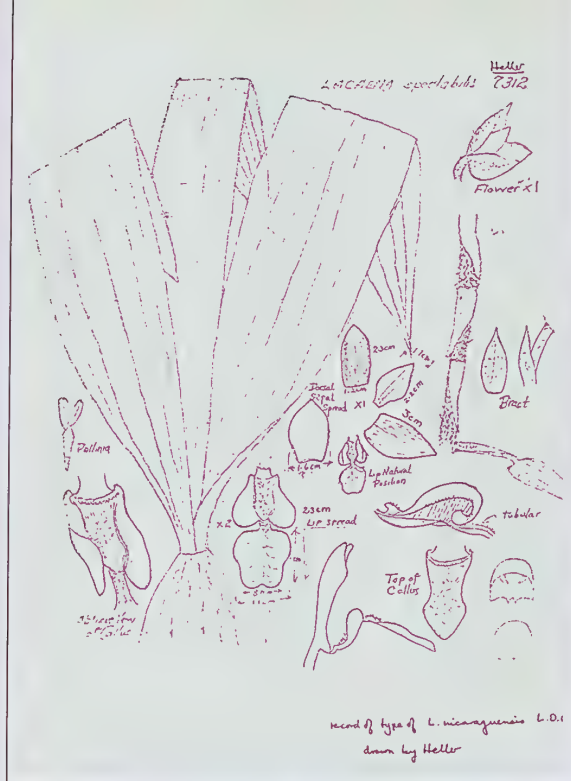
There are only a limited number of clear and detailed information about the distribution of the two recognised species. *Lacaena bicolor* seems to be distributed from southern Mexico through Guatemala, Belice, El Salvador and Honduras to Nicaragua. *Lacaena spectabilis* is distributed from Panama through Costa Rica and Nicaragua to Honduras and El Salvador. *Lacaena nicaraguensis* is mentioned only once from Nicaragua, the locality is in an area where both *Lacaena bicolor* and *Lacaena spectabilis* were collected. Obviously the area from where both species are recorded is not limited to Nicaragua but includes also El Salvador and Honduras.

Records of *Lacaena spectabilis* from Costa Rica are not confirmed, also records of *Lacaena* from Colombia (Sander, 1927) and Venezuela (Appun, 1856) are most probably wrong and either based on wrong identification of the plant or wrongly reported by intention.

The genus is restricted to Central America, no records south of Panama are confirmed, *Lacaena grandis* Kraenzlin from Bolivia is a member of the genus *Bifrenaria* and has nothing to do with *Lacaena*.

Distribution in cultivation

As mentioned above both species of the genus are extremely seldom in cultivation. First of all both are rather seldom collected in nature because they are found only occasionally and as single plants. Second, both species are far from easy in culture and pass away very fast once they reach a certain degree of weakness. In Europe the genus is represented only in a very few collections like the botanical gardens in Heidelberg and Munich and the Herrenhäuser Gärten in Hannover. In Australia, Dark Star Orchids (Hans Schaible) has marketed seedlings of *Lacaena spectabilis*. All illustrations used in this article are by the author except where noted.

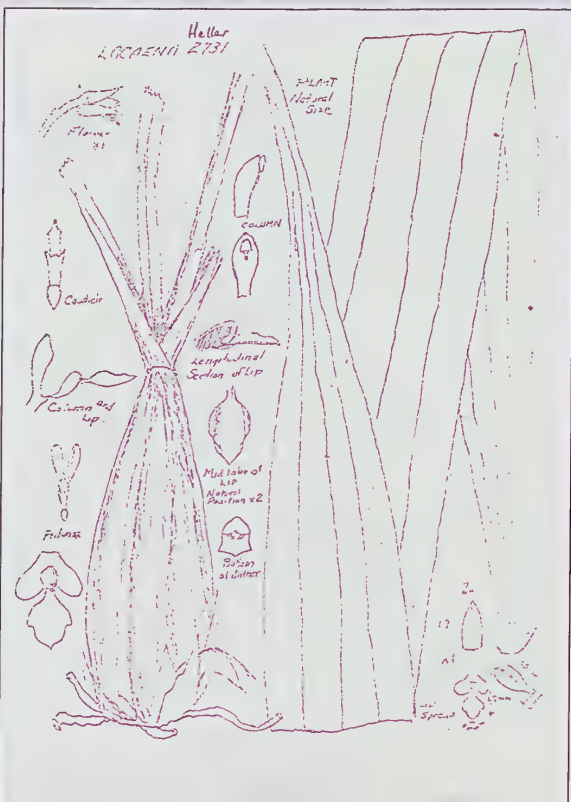


Lacaena spectabilis from Nicaragua, drawing by HELLER.

Herbaria

There are not many herbarium specimens of *Lacaena* available, beside the herbaria at Kew (LINDLEY and others) and the one in Vienna (REICHENBACH) only relatively few specimens are known. SIEGERIST listed 1984 a total of 14 specimens,

Lacaena nicaraguensis, drawing by HELLER, used by L.O.WILLIAMS for his description.



Adams (1985)	<i>Lacaena bicolor</i>	Belize
Ames (1937)	<i>Lacaena spectabilis</i>	Costa Rica, Honduras
Ames (1953)	<i>Lacaena bicolor</i>	Guatemala
Appun (1856)	<i>Lacaena spectabilis</i>	Venezuela ?? (wrong identification ?)
Atwood (1980)	<i>Lacaena bicolor</i>	Nicaragua (detailed)
Catling (1988)	<i>Lacaena bicolor</i>	Belize
Dix (2000)	<i>Lacaena bicolor</i>	Guatemala (detailed)
Dressler (1993)	<i>Lacaena bicolor</i>	Costa Rica,
	<i>Lacaena spectabilis</i>	Costa Rica, Panama
Garcia Castro (1993)	<i>Lacaena spectabilis</i>	Costa Rica, Panama
Guzman (1992)	<i>Lacaena bicolor</i>	El Salvador,
	<i>Lacaena spectabilis</i>	El Salvador
Hamer (1974)	<i>Lacaena spectabilis</i>	El Salvador
Hamer (1982)	<i>Lacaena bicolor</i>	Nicaragua (detailed),
	<i>Lacaena spectabilis</i>	Nicaragua (detailed)
Hamer (2001)	<i>Lacaena bicolor</i>	Nicaragua,
	<i>Lacaena spectabilis</i>	Nicaragua
Hawkes (1959)	<i>Lacaena bicolor</i>	Nicaragua
Hemsley (1883)	<i>Lacaena bicolor</i>	Mexico, Guatemala,
	<i>Lacaena spectabilis</i>	Costa Rica
Horich (1956)	<i>Lacaena bicolor</i>	Honduras
Horich (1963)	<i>Lacaena bicolor</i>	Mexico (detailed)
McLeish (1995)	<i>Lacaena bicolor</i>	Belize
Molina (1975)	<i>Lacaena bicolor</i>	Honduras
Mora de Retana (1986)	<i>Lacaena spectabilis</i>	Costa Rica (detailed)
Mora de Retana (1992)	<i>Lacaena spectabilis</i>	Costa Rica
Ospina (1974)	<i>Lacaena bicolor</i>	Mexico to Costa Rica
Pupulin (2002)	<i>Lacaena spectabilis</i>	Costa Rica
Sander (1927)	<i>Lacaena bicolor</i> (varieties)	Colombia ??
Soto Arenas (2003)	<i>Lacaena bicolor</i>	Mexico (detailed)
Summerhayes (1958)	<i>Lacaena bicolor</i>	Mexico, Guatemala,
		Honduras, Costa Rica ?
Tonduz (1895)	<i>Lacaena spectabilis</i>	Costa Rica
Williams (1964)	<i>Lacaena nicaraguensis</i>	Nicaragua (detailed)
Williams (1965)	<i>Lacaena bicolor</i>	Mexico, Guatemala,
		Honduras, Costa Rica ?

Label of the type specimen of *Lacaena* (*Nauenia*) *spectabilis* from the herbarium REICHENBACH (no. 44742).



Lacaena bicolor at AMES, F, EAP, US and SEL, *Lacaena spectabilis* including *Lacaena nicaraguensis* at AMES, SEL, US, EAP and MO (Siegerist, 1984).

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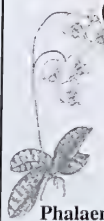
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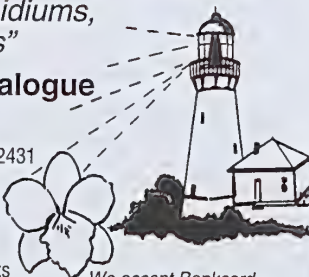
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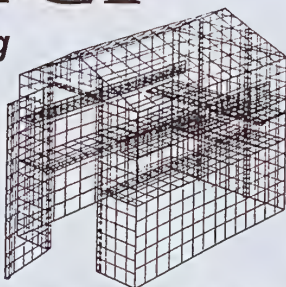
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Winter Care for Your Orchids

by Neil Minter

Cooler weather signals the approach of winter and with it the need for some extra care with your orchids. The hardest thing for many growers is to get their culture regime right for the winter months. Last winter appeared mild & yet we experienced a number of the severest frosts that some growers could recall in recent times. The weather was mostly clear, with little rain to speak of, with few of the overcast days of drizzling rain that sometimes is typical of Sydney winter weather.

Just the right conditions for those early morning frosts!

During summer many orchids are to some degree forgiving of incorrect culture, as they are in active growth, but may compensate by not flowering or limiting new growths. Winter culture is a different story and plants will often die as a result of incorrect culture.

Understanding the origins of your orchids and the climate they experience in the cooler months is the key to successfully growing them through winter. Needs of species are often easy to define, where as hybrids need a little research to discover their background in order to make a prediction of what characteristics they have inherited from their parents. Finding this information is a matter of reading. Society library's and the Internet are good sources and of course asking questions of other growers who live in your area.

Many orchids come from regions where there is little rainfall during winter, surviving on heavy dews that occur in the cooler months. This amount of water is sufficient for the plants as they have adapted by slowing their growth – you will see the green tips on the roots seal over. This means they require far less water than when they are in active growth AND much less fertiliser as well.

The number one killer of many orchids in winter is WATER! Many growers can't avoid the temptation of continuing the watering patterns used over the warm months and kill their plants with "KINDNESS". For those heavy-handed with water, purchase a SuperFine Foggit nozzle (they produce a very fine mist to apply over foliage without really wetting plants), it may save your plants while satisfying YOUR watering needs.

To control watering throughout winter it is essential to provide overhead covering for your bush house. Polyshade and Solarweave are both durable plastic that will last a number of years. However, if it's too time consuming or difficult to erect and remove plastic on an annual cycle, give some thought to a permanent covering such as fibreglass or polycarbonate sheeting. Plastic sheeting can also be attached to walls of the bush house, reducing the chill factor of cold southerly and westerly winds. Slowing air movement around your plants will help to maintain an

even temperature and reduce excessive transpiration that causes dehydration.

As day length shortens and the amount of sunlight decreases plants water needs also decrease. They do not dry out as quickly and there is less evaporation of water. Aim to have your pots dry out slightly between waterings, this stops plants being too wet for any length of time and avoids root rot. On average once a week is sufficient for most plants during a typical winter. During a prolonged period of foggy, winter drizzle with low day temperatures, it will not hurt your plants (depending on the genera) to be NOT watered for a couple of weeks.

During winter always water in the morning, on a clear bright day, on a rising temperature so that your plants have a chance to dry by night. Keep the leaves dry, it will help to prevent fungal related problems.,

A light misting in between watering, will emulate the dews, which is the only moisture that many orchids get for weeks at a time during winter. Some plants like Paphiopedilums will not tolerate water sitting in the leaf axils during cooler weather and should be watered from the bottom by being soaked in a container of water for a few minutes. Size of plants will affect frequency of watering; orchids in smaller pots tend to dry out faster and need more frequent watering.

Other important points to consider are types of pots and potting medium. Group plants together as much as you can, to allow watering at different rates to suit cultural needs. Remember seedlings don't have the reserves of adult plants and can dehydrate quickly causing severe setback, that some may never recover from.

Damp down your bush house several times a week to maintain a reasonable level of humidity. Watering the floor late in the afternoon during frost prone periods will also assist in preventing frost damage.

In cool weather orchids generally require little fertiliser because growth is slow. HOWEVER seedlings and high altitude plants may still be in active growth and require a reduced fertilising program. As a safe compromise halve the fertiliser strength and extend the time between applications to about three weeks. Use low nitrogen fertiliser (eg. HSO 10, Amino K, fish emulsion, Seasol etc) or one that does not contain Urea. Plants require high light levels to synthesize Urea during photosynthesis, when not utilised it will cause root and leaf tip burn.

While plants have reduced growth and photosynthesis during winter, light is still necessary for plants to maintain a healthy metabolism, otherwise they weaken, allowing diseases to cause damage. As day length shortens compensate with reduced shading to provide the maximum amount of light that your plants will cope with, short of burn

(Envy(r) will help prevent sunburn – see below for further details). Many plants in their natural environment experience greater winter light levels as trees shed leaves (deciduous/ semi-deciduous) or for those growing at ground level, grasses die back during the drier winter months.

Extra light will allow the bush house surround to retain some of the absorbed heat that built up during the day and night temperatures may not drop to levels that will cause injury to your plants.

What can be done to assist my orchids cope with the stress of the cooler months?

When cooler weather approaches, there are a few precautionary measures that you might like to use in order to minimise the stress and possible resultant plant loss that can occur.

1. Continued applications of high levels of nitrogen will stimulate growth, which will be softer due to lower light and temperature levels. These growths will be much more susceptible to frost and fungal problems.

As photosynthesis reduces, so does the need for higher levels of nitrogen. Reduce the level of nitrogen, while increasing the potassium level in your fertilising program during autumn, this will provide the beneficial effects of potassium, which are greater resistance to:

Diseases: plants are more resistant to entry and infection by fungi, bacteria and viruses.

Drought: potassium regulates plant transpiration by controlling stomatal opening, thus maintaining turgor, and reducing water loss and wilting.

Frost: potassium promotes growth of large xylem vessels and high content of sugars and reserve carbohydrates in the cell, as well as thicker cell walls resulting in improved frost hardness.

Lodging: potassium builds cellulose and counteracts the effects of excessive nitrogen, making stems stronger and thicker.

To maximise effectiveness of increased potassium, maintain the addition of calcium to your fertilising program.

2. Apply Envy® at 3 to 4 weekly intervals, beginning in mid-autumn. Envy(r) forms a semi-permeable membrane over the leaf surface. This reduces plant transpiration and helps guard against freeze damage which occurs when ice crystals form around bacteria which are present on foliage. Envy® assists in increasing frost tolerance by as much as 4° Celsius and reducing transpiration by up to 60%. Reduction in moisture loss by plants raises the level of plant turgidity, which has been shown to aid plants in surviving periods of freezing.

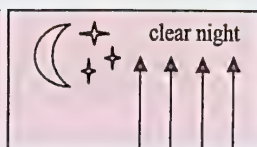
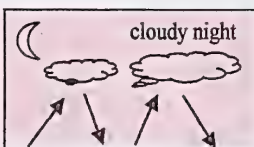
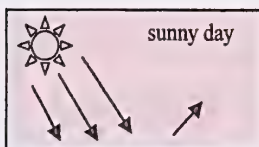
3. Prevention is far more effective than attempting to cure problems that arise. An application of Fongarid® at 3 to 4 weekly

intervals through autumn will help to build a systemic resistance to some rots and spots that may occur through winter.

If a period of wet weather is experienced in the cold months, an application of Mancozeb at weekly intervals will help prevent some of the black spotting that occurs on soft leaved species such as *Lycaste*, *Zygopetalum* etc. Don't forget to apply some of the fungicide to the bush house floor. As you are keeping this wet to provide humidity, it can often promote fungal growth due to the cold, wet conditions. Keep your bush house floor clear of leaves shed during the colder months as these can be a source of bacterial and fungal infections.

Understanding Frost

The sun warms the soil surface during the day; heat is radiated into the cool atmosphere



during the night. Clouds at night can absorb and reflect heat back to the earth. Calm, clear nights pose the greatest danger of frost since there is no wind to mix the ascending warm air with the descending cold air, and no clouds to radiate heat back to the soil. The coldest temperatures occur just prior to day-break.

Cold air settles downward, flowing like water, to the lowest point.

Hot air rises. Cold air may collect at the bottom of a slope. Cold winds compound temperature loss.

Understanding Plant Response to Cold

Effects of temperature extremes vary with plant species, stage of growth, age, general health and water content. Young, actively growing, flowering, and/or dehydrated plants tend to be most vulnerable.

Cold temperatures and short day length, slow plant growth and cause dormancy, making plants less susceptible to frost damage. Actively growing foliage is very susceptible to frost damage. If a freeze occurs when there has been no prior cold weather to "harden off" a plant, the damage will be more extensive. Therefore the heaviest damage from low temperatures generally occurs in early autumn when there is a sudden cold snap or any time cold temperatures occur after a warm winter period.

The lower the temperature, the longer the exposure, and the faster the temperature drops, the greater the damage to the plant.

Common types of damage include: death of dormant flower buds, dieback of broad-leaved plants, damage to tender shoots and flowers.

Preventing Damage

Plant Placement

Place frost sensitive plants in sheltered locations. Western and northern exposures tend to be warmest. Plants placed higher within a growing area will experience warmer temperatures. Block walls, rocks and patios collect and reflect the heat of the sun. Full sun is warmer than shaded locations. Protection from southerly winds will help reduce effects of wind chill. Plants below enclosed structures should be placed to avoid condensation drips from metal support structures or protective covers placed above them (see Reduce Heat Loss)

Plant Care

Frost injury occurs when ice crystals form on the leaf surface, freezing leaf tissue. Damage will be less severe if the plant is not already drought-stressed. Provide the maximum of light, short of sunburn. Mulching floor spaces of growing areas with bark, or better still gravel, will help conserve moisture in the ground, which will in turn assist with preventing heat loss. Manage watering carefully, keeping the moisture level as even as possible.

Reduce Heat Loss

Reduce heat transfer by placing plastic sheeting on the cooler, south and west sides of your bush house.

During periods of exceptional frost activity, sheets of newspaper can be draped over the plants at night to provide some extra protection.

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young seedlings as the sides will prevent wind chill and allow enough space to provide a cover to be placed over it, forming a mini cloche. For slightly large plants, several bamboo stakes placed into the pot will support a clear polythene bag, creating a mini greenhouse. Such enclosures protect the plants within from rapidly losing the heat they have absorbed during the day and provide an extra measure of protection for young sensitive plants.

Utilize Heat from the Immediate Surroundings

Solid walls and benches exposed to the sun during the day are good sources of heat at night. A covering of pebbles or crushed brick on walkways and bush-house surround can also assist. Brick walls are fantastic heat banks that slowly radiate absorbed heat at night. Dark coloured surfaces absorb heat and hold it longer. Bricks and drink bottles, painted black can be used as solar absorbers if placed around plants.

Pans of water placed beneath benches provide extra humidity without the need for excessive watering, while at night releasing the bonus heat the water absorbed during the day.

Add Heat

Some plants will not tolerate temperatures below 10 or 20°C. Understanding where your plants originated from and/or their hybrid make up will assist in determining whether the plants may grow cool in your conditions. Flower buds blasting, new growth collapsing, large watery leaf spots and bulb rot are a sure sign that the plant is in a state of cold stress and will die if its growing conditions aren't modified.

Be prepared to move some plants quickly to a warmer growing area if need be, I have a mini greenhouse about 1.5m high x 1m wide that is warmed by an aquarium heater and has a Grolux fluorescent light that can house about 50 to 60, 3" or 4" seedlings. Having a safety net available can prevent the hasty provision of housing plants in unsuitable areas of your house.

At times, no matter what precautions you take, you will purchase plants that exhibit signs of rapid deterioration in their first winter in your growing conditions. Even if the literature suggests that they are cool growers, they may have experienced much warmer temperatures in the nursery where they were raised. These plants need to be housed in more temperate surrounds until they can acclimatise to your conditions before next winter.

Minimising Damage

Should all your precautions fail and your plants suffer frost DO NOT allow the Sun to thaw them.

Rapid thawing causes plant cells to expand quickly, bursting cell walls, resulting in watery and blackened dead patches. If you spray the leaves with water from a hose you will minimize the extent of the damage.

Don't use water, which has been warmed above the current air temperature, as the difference in water and plant tissue temperature, will cause further damage to the plant cells. Frost damaged plants may be susceptible to fungus and bacterial infections and the necessary precautions should be taken to reduce this risk.

Black Frost

Black frost occurs when the dew point is too low for frost to form. That is the temperature is below zero but there is not enough moisture in the air to produce a visible frost. The reason it is called a black frost is that shortly after a black frost the leaves of frost susceptible plants will turn black and die, because moisture is drawn from the plants tissues to form ice crystals. This type of frost is severely damaging to plants and leads to complete plant cell collapse.

N.B. Given the correct set of conditions, a Black Frost can form beneath overhead protection unless constant air movement is available to avoid stratification of the air and the humidity level around the plants is maintained by damping down the bush house floor.

I hope this article has provided you with some thoughts, as to how you will provide extra care, for your plants over the winter period.

Neil Minter

Email: nminter1@yahoo.com.au

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Attention AOR readers and Orchid Societies

"This and That" is a regular feature of the Australian Orchid Review and readers and Orchid Societies are invited to contribute any small news items of interest to Orchid lovers.

The deadline for items can be found on page 3.

Address all correspondence to the Editor, "This and That", Australian Orchid Review, 14 McGill Street, Lewisham, NSW 2049.

Email: bbadger@graphicworld.com.au

Native Orchid Show – Brisbane

Spring is eagerly awaited each year by native orchid enthusiasts everywhere, as this is the time when those dependable favourites present their wonderfully perfumed heads of flowers for us to enjoy for all too short a time.

Each year seems to bring a significant improvement in the colour range and overall quality of these magnificent species and hybrids, as newer clones flower for the

first time and previously previewed plants mature and show their best.

Last year's inaugural show lived up to its promise and produced a wonderful display of colourful, richly fragrant flowers for all to enjoy. The Australasian Native Orchid Society (Qld) KABI Group Inc. will be hosting this year's Australasian Native Species and Hybrids Show at the Lion's Hall, Lawnton Showgrounds, Gympie Road, Lawnton from 9 am on Saturday and Sunday the 28th and 29th of August 2004. This show promises to be the major venue in Brisbane for exhibiting and viewing the best of native orchids in this area.

The latest seedlings and mature plants of species and hybrids of all native genera will be available for purchase from a number of top vendors and refreshments will be available. A full range of orchid books and publications will also be on sale and of course, advice will be freely available from many keen enthusiasts. – *Dave Groffen, Email: agroffen@gil.com.au*

Orchid Species (NSW) Show and Orchid Auction

The annual NSW Species Society show and auction will be held on Saturday 23rd October 2004 at the Community of Christ Neighbourhood Centre, 10-14 Taylor Street, West Pennant Hills. The show is open from 9.15 am and the auction starts at 10.15am. A good selection of rare and unusual species will be auctioned on the day. A barbeque lunch and snacks will be available. All are welcome, and this is a great opportunity to pick up a bargain or two. – *Jean Fulcher, President, Orchid SPECIES (NSW), Email: gfulch@bigpond.com*

St Ives Orchid Fair 2004

The St Ives Orchid Fair will again be held at St Ives Showground, this time from the 13th-15th August 2004. Last year, the organiser's received an email from a Katie Grand of Killara, addressed to the Members of the Orchid Societies of Sydney's North Shore. Lesley Bromley kindly passed this on for the readers of the AOR to enjoy. It read:

"In August my husband and I attended your wonderful Orchid Show at the St. Ives Showground. I was very overwhelmed to see such a vast variety of orchids and everyone of your orchids gave me so much pleasure that my impressions had to be put down by way of a poem that I am enclosing. I thought you might be interested to know just how I felt when I spent a wonderful afternoon viewing your marvellous exhibition. I have been encour-

aged by many of my friends to send it on to you. If you would like to use my poem for your circular I would be most humbly honoured. Looking forward to your next exhibition."

THE ORCHID SHOW

The last time I saw orchids on display,
Was years ago in Rotorua one fine day.
There were glorious masses of orchids on view,

Each species had its shape, colour and hue.

Now years later at the Show Ground in St Ives,

I gaze in amazement with wide-open eyes,

So many lovely orchids large and small,
Are there before us to appreciate them all.

Each stalk had beauty in their petals and colour

And many with geometric patterns like no other.

It was difficult to decide which I thought was the best,

And was glad not to judge them while I viewed the rest.

Most had no scent; they all bloomed with perfection,

Remarked a visitor to me who had quite a collection.

I thought of her remarks that nature was there

If we put in some hard work and the love to care.

To bring joy and appreciation to people like me

Not having a clue how to grow these species.

To produce these flowers for us to appreciate

And all it cost us was dollars four at the gate.

So thanks to all exhibitors for your patience to grow,

These gems we admire when we come to your show.

The world should be full of good people like you,

Growing rainbow orchids of every colour and hue.

The visitor and I thought for a moment or two

Why the world should be in such a big stew,

Why they pile up their arms of a war-like nature

When flowers seem so much easier to nurture.

So let's invite nations to your Orchid Exhibitions,

And tell them to stop piling all their armunitions. – *Katie Grand, 42 Charles Street, Killara 2071.*

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NEW ORCHID HYBRIDS
JANUARY - MARCH 2004 REGISTRATIONS

JANUARY - MARCH 2004 REGISTRATIONS

Supplied by the Royal Horticultural Society as International Cultivar Registration Authority for Orchid Hybrids

NAME	PARENTAGE	REGISTERED BY (O/U Originator unknown)
ADA		
Beverston Castle	<i>Ada</i> [Brs.] <i>ocaneensis</i> x <i>Ada aurantiaca</i>	R.Stevens
ADAPASIA		
Ognoc	<i>Asp. epidendroides</i> x <i>Ada</i> [Brs.] <i>glumacea</i>	H.Rohrl
AERIDOCENTRUM		
Key Lum	<i>Aer. odoratum</i> x <i>Asctrm. Sagarik Cold</i>	Kok Key Lum(Serdang)
AERIDOVANDA		
Kasom Extraordinary	<i>V. liouvillei</i> x <i>Aer. flabellata</i>	M.Chanyangam(S.Srisuk)
Noreen	<i>V. [Ple.] teres</i> x <i>Aerid. New Dawn</i>	W.Morris
ANAPHORIKUS*		
Aricala	<i>Grls. ecalcarata</i> ♀ x <i>Aslla. africana</i>	M. & M.F.Bourdon
ANGULOCASTE		
Transatlantic Beauty	<i>Angstr. Maureen</i> x <i>Lyc. Athena</i>	A.Black(H.Oakeley)
ARANDA		
Broga Giant	<i>Aranda Pembantu Farmasi</i> x <i>V. Gordon Dillon</i>	Tan Chin Heong
ASCOCENDA		
Ayako Fuji	<i>Ascta. Kwa Geok Choo</i> x <i>Ascta. Peggy Foo</i>	Singapore Bot.Cdns
Beverley Woods	<i>Ascta. Nicholas Keith</i> x <i>V. tessellata</i>	E.Woods
Bob's Fortune	<i>Ascta. Tublim Velvet</i> x <i>Ascta. Fuchs</i>	Gail Freeman(O/U)
Doctor Gary Label	<i>Ascta. Fuchs Golden Shiner</i> x <i>Ascta. Khun Nok</i>	R.Hatos
Kulwadee Fragrance	<i>V. Gordon Dillon</i> x <i>Ascta. Gao Chia Long</i>	Singapore Bot.Cdns(O/U)
Peddler's Golden Dawn	<i>Ascta. Tete Balaksy</i> x <i>Malaco. Cold</i>	V.Flower(O/U)
Subytal	<i>Ascta. Thai Joy</i> x <i>V. Thanchai</i>	Singapore Bot.Cdns
Shah Rukh Khan	<i>Ascta. Rubychar</i> x <i>Ascta. Yip Sum Wah</i>	V.Flower(O/U)
The Peddler	<i>Ascta. Yip Sum Wah</i> x <i>V. Lumpini Red</i>	
BARKERIA		
Butterflies	<i>Bark. whartonianana</i> x <i>Bark. spectabilis</i>	Hoosier(Glitsenstein/Hoosier)
BRASSIA		
Edosa	<i>Brs. Edvah Loo</i> x <i>Brs. Datacosa</i>	H.Rohrl
BRASSOCATTLEYA		
Gideon's Rock	<i>C. Eloy Alida</i> x <i>Bc. Mary Agnes Chase</i>	Rex Foster Orchids
Misaki Song	<i>C. Hawaiian Wedding Song</i> x <i>Bc. Pastoral</i>	N.Taki(Yoshitaka Yamamoto)
Noble's Distinction	<i>C. Irma Dulce</i> x <i>Bc. Pink Dinah</i>	S.Barani
BRASSOLAELOCACTLEYA		
Alice Beck	<i>Lc. Peggy Huffman</i> x <i>Bc. Del Rosa</i>	C.Moulton
Bentham	<i>Bc. Benimusume</i> x <i>Lc. Purple Beat</i>	C.Kimbara
Benikomachi	<i>Bc. Prince Yutuo</i> x <i>Lc. Mini Purple</i>	H.Iakono(C.Kimbara)
Benimusume	<i>Bc. Strathview</i> x <i>Lc. Mini Purple</i>	Kyo Ching Chen
Bread Beauty	<i>Lc. Puppy Love</i> x <i>Bc. Tostie Aoki</i>	C.Kimbara
Changhua Joker	<i>Bc. Hawaiian Queen</i> x <i>Bc. Hsiao Noki</i>	Kyo Ching Chen
Chuan Tung Hsiang	<i>Bc. Haw Yun Stick</i> x <i>Bc. Casus Landosa</i>	Too Hsiang Liu
Cinnamon Landosa	<i>Lc. Cinnamon</i> x <i>Bc. Tzeng Wen Beauty</i>	O.I.Bronfield(I.Rehfield)
Cute Angel	<i>Lc. Puppy Abida</i> x <i>Bc. Tzeng Wen Beauty</i>	U.Juan Orch.
Cute Lady	<i>Lc. Boppy</i> x <i>Bc. Melowglow</i>	U.Juan Orch.(O/U)
Diambo	<i>Lc. Irene Finney</i> x <i>Bc. Pink Empress</i>	Dian Bao
Huang An	<i>Bc. Chunyueh</i> x <i>Bc. Chialin Beauty</i>	Ching Hao
Huang Amber	<i>Bc. Tzeng-Wen Beauty</i> x <i>Bc. Taiwan Queen</i>	Chih Cheng Chen
Huatand Angel	<i>Bc. Tzeng-Wen Beauty</i> x <i>Bc. King of Taiwan</i>	Chih Cheng Chen
Huatand Aromia	<i>Bc. Tzeng-Wen Beauty</i> x <i>Bc. Pink Empress</i>	Chih Cheng Chen
Huatand Chili	<i>Bc. Tzeng-Wen Beauty</i> x <i>C. Chocolate Drop</i>	Chih Cheng Chen
Huatand City	<i>Bc. Tzeng-Wen Beauty</i> x <i>Bc. Chunyueh</i>	Chih Cheng Chen
Jessica Rose	<i>Lc. Little Big Man</i> x <i>Bc. Lois McNeil</i>	C.& M.Neucum
Jinn Feng Wish	<i>Bc. Pamela Finney</i> x <i>Bc. Mahina Yahiro</i>	Chin Feng Chiang
Kaori Yohena	<i>Bc. Pamela Finney</i> x <i>Bc. Sakurayama</i>	Chin Feng Chiang
King of Rayu	<i>Bc. King of Rayu</i> x <i>Bc. Cammial City</i>	Chun Yu Wu
King of Rong Rose	<i>Bc. King of Rayu</i> x <i>Bc. Oogee</i>	U.Juan Orch.
Long Life Seagulls	<i>Bc. Chiyong Guo Chaffinch</i> x <i>Bc. Warm Color</i>	C.Kimbara
Madeline O'Brien	<i>Lc. Kooula Seagulls</i> x <i>Bc. Edisto</i>	Long Life[USA]
	<i>Bc. Georae King</i> x <i>Bc. Portage Glacier</i>	R.& M.Gerber(Kodama)

NAME	PARENTAGE	REGISTERED BY	NAME	PARENTAGE	REGISTERED BY
CATTLEYTONIA (continued)			CYMBIDIUM (continued)		
New River	Ctra. Why Not x C. leopoldii	J. Hermo	Kiwi Joker	Cym. Sleeping Dream x Cym. Celadon	N. Porter
Regarding Miss Shirley	C. Walkerinter x Ctra. Capri	D. Sandquist	Kiwi King	Cym. Valley King x Cym. Hazel Tyers	N. Porter
CATYCLIA *			Kiwi Lady	Cym. Terama x Cym. Tebys	N. Tucker
Chissy	E. [Epa.] gracilis x C. Christina Waglay	Rex Foster Orchids	Kiwi Mint	Cym. Pure Love x Cym. Winter Bride	N. Porter
CAULTONIA *			Krista's Pearl	Cym. Sylvan Melody x Cym. Allara	N. Porter
Jean Niemann	Bro. sanguinea x Cau. [Diacm.] bilamellatum	D. Niemann	Last Hurrah	Cym. Summer Pearl x Cym. Royale Fare	S. Barrie
CHRISTIEARA			Little Dorring	Cym. Last Tango x Cym. Sarah Jean	N. Tucker
Ngee Ann	Ascd. Fuchs Harvest Moon x Chtra. Iiad	Singapore Bot.Gdns	Maui	Cym. Pure Bisque x Cym. devonianum	A. Velardi
CIRRHOPHYLLUM			Memoria Richard Feynman	Cym. Victoria Desert x Cym. Sussex Dawn	W.D. Bailey
Crowpoint	Bulb. [Cirr.] rathschildianum x Cirr. frostii	M. LeDoux	Nina Mahogany	Cym. Pink Champagne x Cym. tracyanum	M. Stagg(A. Easton)
CLOWESETUM			Pagan Gold	Cym. Rolf Bolin x Cym. Pontac	John Law(K. Purcell)
Creative Green Dragon	Cym. barbatum x Clo. Raymond Lerner	Lee Nam Fook	Playa Vista	Cym. Royale Fare x Cym. Coraki Advent	S. Barrie
Heart's Blood	Clo. Dragon's Treasure x Cym. complanatum	G. Monnier	Quick Draw	Cym. Dark Jay x Cym. Peter Dawson	K. Okamoto
Jem's Dragon Tears	Cm. worcewiczii x Csm. cirrhaeoides	G. Monnier	Red Khan	Cym. Dark Jay x Cym. Over-the-Sensation	W.D. Bailey
Loppe Farlansiae	Cym. barbatum x Clo. Black Jade	Lee Nam Fook	Red Kiwi	Cym. Khao Flame x Cym. Scaramouche	S. Barrie(G. Gilles)
COLMANARA			Rincon Lightning	Cym. Sylvan Melody x Cym. Red Beauty	N. Porter
Rustic Midnight	Otdra. Amethyst Gem x Otdcra. Crowborough	H. Liebman	Royalla	Cym. Via Rincon-Vista x Cym. Smokestack Lightning	N. Porter
CYNODES			Ruby Brook	Cym. Royale Fare x Cym. Cronulla	Kimberley Orch.(Schaefer)
Jem's Blood Ruby	Morm. harichii x Cy. chlorochilum	G. Monnier	Sahara Red	Cym. Brook Street x Cym. Ruby Eyes	S. Barrie
Jem's Golden Dragons	Cy. warszewiczii x Morm. maculata	G. Monnier	Suzette	Cym. Maverrick x Cym. Ruby Eyes	D. & C. Allen(A. Easton)
CYMBIDIUM			Trinity	Cym. Sylvamae x Cym. Sensation	S. Barrie
Alexandra's Flame	Cym. Alexandra Rose x Cym. Khan Flame	S. Barrie(G. Gilles)	Trinity Lightning	Cym. Dark Tzar x Cym. Sylvaksis	W.D. Bailey
Amber Sands	Cym. Wallacia x Cym. Glowing Sands	S. Barrie(G. Gilles)	Trinity Kiss	Cym. Smokestack Lightning x Cym. Trinity Hall	S. Barrie
Amber Wall	Cym. Lunar Wall x Cym. Tony McCartney	S. Barrie(G. Gilles)	Wing Kiss	Cym. Early Kiwi x Cym. Kiwi Rhapsody	Kimberley Orch.(Schaefer)
Arabian Gold	Cym. Tony McCartney x Cym. Glowing Sands	E. Young O.F.	Wong Flame	Cym. Eastern Princess x Cym. Winter Bride	Kiwi Orch.
Beival	Cym. Les Landres x Cym. Cool Point	E. Young O.F.	Yellow Gold	Cym. Young Ruby x Cym. Lunar Flame	S. Barrie(G. Gilles)
Boulet Port	Cym. Jesson Mill x Cym. Pontac	E. Young O.F.	DENDROBIUM	Cym. Culpaulin x Cym. Jack Hudlow	W.D. Bailey
Bulb. Port	Cym. Troadix x Cym. Coupe Point	E. Young O.F.	Adonis	Den. Pink Doll x Den. Spring Dream	J. Yamamoto
Carrotou Selous	Cym. Troadix x Cym. Coupe Point	E. Young O.F.	Akane Chun	Den. Forty Niner x Den. Spring Dream	J. Kabejama
Cherry Fuss	Cym. Cherry Lime x Cym. Fuss	S. Barrie	Alcane Hua	Den. Tengu Abdul Rahman x Den. Madonna	Kim Seah Lee
Compton Down	Cym. Nip x Cym. Ngare	McBarn's	Amant	Den. Fantasia x Den. Melho Toy	J. Yamamoto
Corakiwi	Cym. Coraki x Cym. devonianum	M.T. Hughes(N. Porter)	Appleblossom	Den. Benjamin x Den. Nice Dream	J. Yamamoto
Counless Margaret	Cym. Tracey Reddaway x Cym. Pauwelsii	N. Porter	Australian Burgundy	Den. Star Wars x Den. Spring Doll	Arnold J. Klehm
Darch	Cym. Doctor Stanley Parkinson x Cym. Alegria	Ezi-Gro	Baby Stephen	Den. Victoria Flower x Australian Macbride	Australian O.N.
Darch Celebration	Cym. Hazel Tyers x Cym. Golden Celebration	Ezi-Gro	Bergen	Den. Kallin Flea x Den. Candice	Orch. By Cita
Darch Doctor	Cym. Doctor Stanley Parkinson x Cym. Salsuma	Ezi-Gro	Breathless	Den. Awesome x Den. Autumn	Down Under N.O.
Darch Egret	Cym. Palace Court x Cym. Lone Star	Ezi-Gro	Brilliant Smile	Den. Wave King x Den. Super Chance	Down Under N.O.
Darch Glory	Cym. Uncle Dickie x Cym. Pink Globe	Ezi-Gro	Bronson	Den. Rutherford Starburst x	J. Yamamoto
Darch Goldfinch	Cym. Fiti x Cym. Camaro	Ezi-Gro	Buster	Den. curvicaule [speciosum var. curvicaule]	Down Under N.O.
Darch Goshawk	Cym. John Jansma x Cym. Chocolada	Ezi-Gro	Charm Spot	Den. Post Printing x Den. stratiotes	Down Under N.O.
Darch Hawk	Cym. Tony McCartney x Cym. Hot	Ezi-Gro	Claudia Queen	Den. Sky Rose x Den. Benikuyaku	J. Yamamoto
Darch Hot	Cym. Tony McCartney x Cym. Palaces Court	Ezi-Gro	Deemas	Den. Brinawa Charm x Den. Rutherford Sunspot	Down Under N.O.
Darch Palaces	Cym. Blush of Spring x Cym. Pebbles	Ezi-Gro	Demitasse	Den. Carmencita Diaz x Den. Kuranda Classic	Orch. By Cita
Darch Pebbles	Cym. parishi x Cym. Runaway	Ezi-Gro	Dono's Moon	Den. Spring Moon x Den. Victory Shuu	J. Yamamoto
Darch Runaway	Cym. Hot x Cym. Red Idol	Ezi-Gro	Dreamy Shizu	Den. Sunny Gold x Den. Sunny Hope	Down Under N.O.
Darch Spectacle	Cym. Blush of Spring x Cym. Alegria	Ezi-Gro	Elegod	Den. curvicaule [speciosum var. curvicaule]	Down Under N.O.
Darch Surprise	Cym. Winter Sunrise x Cym. Christopher	Ezi-Gro	Emblem	Den. Dream x Den. Shizu	J. Kabejama(H. Kiriu)
Darch Valley	Cym. Valley Bay x Cym. Dutchman's Delight	Ezi-Gro	Emiko Smile	Den. Elegant Heart x Den. Yondi Gold	Down Under N.O.
Darch Water	Cym. Troadix x Cym. Icho Tower	E. Young O.F.	Evelyn Oing	Den. Wave King x Den. Rainbow Hill	J. Yamamoto
Dennis de Pas	Cym. Troadix x Cym. Icho Tower	E. Young O.F.	Fancy Dream	Den. Pink Doll x Den. Super Chance	J. Yamamoto
First Snow	Cym. Pure Ice x Cym. Melting Snow	S. Barrie(G. Gilles)	Gala Min	Den. Be Happy x Den. lineole [veratrifolium]	Kim Seah Lee
Gabriele's Kiwi	Cym. Last Tango x Cym. Telings	A. Velardi	Gramm	Den. Kumiko Angel x Den. Charm Grande	J. Yamamoto
Heartbreak Doctor	Cym. Kiwi Rhapsody x Cym. Gardalvin	Kiwi Orch.	Great Dream	Den. Fantasia x Den. Memoria Comet	Singapore Bot.Gdns
It	Cym. Doctor Len x Cym. devonianum	Torrance Cym. Soc.(A. Easton)	Happy Dance	Den. Banana Royal x Den. Khurying Boonruen	J. Yamamoto
Jill Rodder	Cym. Hazel Tyers x Cym. Pure Destiny	R. Tucker	Happy Love	Den. Wave King x Den. Lucky Princess	Down Under N.O.
Jolly Joker	Cym. Jessica Dubroff x Cym. Old Friend	N. Porter	Inquest	Den. [Doc.] Sylvester x Den. [Doc.] Twetle	Down Under N.O.
Katy Lyn	Cym. Red Beauty x Cym. mosterii	S. Barrie	Island	Den. Burquo Angel x Den. Victory Shuu	J. Yamamoto
Khan Wall	Cym. Culpaulin x Cym. Katydii	S. Barrie	Jarak Blue	Den. Happy Girl x Den. Fancys Dream	Down Under N.O.
Khanation	Cym. Khan Flame x Cym. Cinnamon Wall	S. Barrie	Kathly Gee	Den. Kumiko Angel x Den. Lucky Doll	J. Yamamoto
Khanon	Cym. Cronulla x Cym. Inspiration	S. Barrie	Kimiko Dream	Den. Cense Baby x Den. Wave King	J. Yamamoto
Kimberley Forest	Cym. Green Glass x Cym. Aluminium	Kimberley Orch.	Kumiko Dream	Den. Intense x Den. Aussie Quest	Down Under N.O.
Kimberley Ochre	Cym. Dorothea Paige x Cym. Zumma	Kimberley Orch.	Kyloppo	Den. Khurying Boonruen x Den. Ruby Las	Singapore Bot.Gdns
Kimberley Point	Cym. Lancashire Khan x Cym. Coll Point	Kimberley Orch.	Kyloppo	Den. Yuan Nan Blue x Den. Brisbane [Blue Hawaii]	K. Sombomphon
Kimberley Sunrise	Cym. Valley Splash x Cym. Kellys Winter	Kimberley Orch.	Lucia Diaz	Den. Cassiope x Den. Wave King	J. Yamamoto
Kiwi Arde	Cym. Bay Sun x Cym. Debbie Dickinson	N. Porter	Lucy's Stripes	Den. Fortune x Den. White Chateau	Down Under N.O.
Kiwi Combo	Cym. Early Kiwi x Cym. Winter Bride	Kiwi Orch.	Lucky Chance	Den. Burqundy Cream x Den. Dianne Gee	J. Yamamoto
Kiwi Cracka	Cym. Hazel Tyers x Cym. Maudant	R. Tucker		Den. Nago Beauty x Den. Chienmai Pink	Down Under N.O.
Kiwi Devonport	Cym. Wistow x Cym. Tracey Reddaway	N. Porter		Den. Kumiko Angel x Den. Wave King	J. Yamamoto
Kiwi Flame	Cym. Flame Hawk x Cym. devonianum	R. Tucker		Den. Sarah Alagoffi x Den. Tengu Abdul Rahman	Kim Seah Lee
	Cym. Last Tango x Cym. Towie Flame	R. Tucker		Den. Diane Shimazu x Den. Tora Chashi	Orch. By Cita
				Den. Paddy Suresh x Den. Blotice	Orch. By Cita
				Den. Sweet Cake x Den. Super Chance	J. Yamamoto

NAME	PARENTAGE	REGISTERED BY
<i>DENDROBIUM (continued)</i>		
Magician	Den. Himezakura x Den. Silky White	
Michelle Flene	Den. Starlet Beauty x Den. Impact Stripes	
Modern Art	Den. Pink Rabbit x Den. Lucky Princess	
Newing Sunset Ray	Den. Golden Blossom x Den. Angel Flower	
Nicole Yoshikane	Den. Newlyn x Den. Kayla	
Oakwood's Wine	Den. <i>smillace</i> x Den. <i>goldschmidtianum</i> [miyake]	
Ohharano	Den. Thailand x Den. Burmese Ruby	
Oing Hock Chye	Den. Diamond Queen x Den. Doreen	
Pearl Heart	Den. [Doc.] Jiggi x Den. [Doc.] <i>striolatum</i> [striolata]	
Pianist	Den. Liholito x Den. <i>strebilobas</i>	
Pink Dream	Den. Musical Star x Den. Holy Night	
Pink Heart	Den. Charm Grande x Den. Pink Rabbit	
Pink Kiss	Den. Harmonious Light x Den. Harmony Glow	
Pink Smile	Den. Pink Doll x Den. Love Call	
Pinkie Super Smile	Den. Harmony Pink x Den. Super Chance	
Rainbow Heart	Den. Ellen Beauty x Den. Himezakura	
Rainbow Kiss	Den. Harmony Queen x Den. Pink Rabbit	
Ray's Spot	Den. Ruthford Sunspot x Den. Ray's Dream	
Reina	Den. Charm Grande x Den. Wave King	
Roh Moo-hyun	Den. Tomoko Takahashi x Den. Knything Boonruen	
Silky Jewel	Den. White Kid x Den. Silky White	
Snow Dream	Den. White Shower x Den. Silky White	
Spring Beam	Den. Lucky Princess x Den. My Honey	
Spring Smile	Den. To My Kid x Den. Wave King	
Sweet Angel	Den. Happy Girl x Den. Sweet Pinky	
Sylph	Den. Seiyoku x Den. White Rabbit	
Teresa Doran	Den. Carol Doran x Den. <i>bigibbium</i>	
The River	Den. Tie-Dye x Den. Bellinger River	
Uranos	Den. Super Chance x Den. White Princess	
Victory Road	Den. Victory Shuu x Den. Lucky Princess	
Violet Fizz	Den. Happy Honey x Den. Cassiope	
Vivory	Den. Vivid x Den. Ivory	
Winter Carol	Den. Comet King x Den. Fancy Queen	
Winter Smile	Den. Pink Rabbit x Den. Carolina	
Yellow	Den. Enigma x Den. Golden Child	
Yellow Moon	Den. Cherry Song x Den. Betty's Bouquet	
	Den. Hambühren Gold x Den. Milky Way	
<i>DISA</i>		
Bloch Family	<i>Disa</i> Elegant Beauty x <i>Disa</i> Diores	
California's Bounty	<i>Disa</i> California Gold x <i>Disa</i> Bountiful	
Kewrocy	<i>Disa</i> Kewdior x <i>Disa</i> Robert Cywes	
Lipstick	<i>Disa</i> Fashion Plate x <i>Disa</i> <i>tripetaloides</i>	
South African Lottery	<i>Disa</i> Pride of Constantia x <i>Disa</i> Japan Grand Prix	
Tridiette	<i>Disa</i> Tridor x <i>Disa</i> Riette	
<i>DORTAENOPSIS</i>		
Blushing Princess	<i>Dips.</i> California Puff x <i>Phal.</i> Yukimai Dream	
Brother Vanessa Hannay	<i>Phal.</i> Golden Pecker x <i>Dips.</i> Brother White Windian	
Chialin Little Lady	<i>Phal.</i> Little Richard x <i>Dips.</i> Rong Guan Mary	
Chialin Little Rose	<i>Phal.</i> Chingruey's Pixie x <i>Dips.</i> Rong Guan Mary	
Chingruey's Fantasia	<i>Dips.</i> Minho Princess x <i>Phal.</i> Ho's French Fantasia	
Chingruey's Heavy Cherry	<i>Dips.</i> Chin-Hsing Cherry x <i>Dips.</i> Tinny Beauty	
Chingruey's Long Last	<i>Dips.</i> Formosa Princess x <i>Dips.</i> Minho Venus	
Chingruey's Lucky Girl	<i>Dips.</i> Hsin Lucky Girl x <i>Dips.</i> Luchia Davis	
Chingruey's Mary	<i>Dips.</i> Chin-Hsing Cherry x <i>Dips.</i> King Shiang's Beauty	
Chingruey's Phoenix	<i>Dips.</i> Tinny Phoenix x <i>Dips.</i> King Shiang's Beauty	
Chingruey's Princess	<i>Dips.</i> Taisuco Pixie x <i>Dips.</i> Minho Princess	
Chingruey's Red Candy	<i>Dips.</i> Taisuco Firebird x <i>Dips.</i> Taisuco Candystripe	
Chingruey's Romance	<i>Dips.</i> Taisuco Princess x <i>Phal.</i> Hsin Romance	
Chingruey's Treasure	<i>Dips.</i> Minho Candystripe x <i>Dips.</i> King Shiang's Beauty	
Chiu Ji Angel	<i>Dips.</i> Chiu Ju Queen x <i>Phal.</i> Mel Dar Lip	
Chiu Ji Beauty	<i>Phal.</i> Chiu Ju Queen x <i>Phal.</i> Ralph Wason	
Colin Taylor	<i>Phal.</i> Cordova's Fire x <i>Phal.</i> Ralph Wason	
Cool Vio	<i>Dips.</i> Hampshire Vio x <i>Phal.</i> Pinkie Denim	
Cosmo-Denim	<i>Dips.</i> Sohma's Ruby x <i>Dips.</i> City More	
Doctor Robert Nam	<i>Phal.</i> Taisuco Kochdian x <i>Dips.</i> Taisuco Snowball	
Ella Shvetz	<i>Phal.</i> Be Glad x <i>Dips.</i> Taisuco Melody	
Formosa Princess	<i>Dips.</i> Formosa Rose x <i>Dips.</i> Minho Princess	
Grace Mitchum	<i>Dips.</i> King Shiang's Beauty x <i>Dips.</i> Regal Velvet	
Hampshire Sweetie	<i>Dips.</i> Tinny Honey x <i>Dips.</i> Hampshire Bulls-Eye	
Harbor Sunrise	<i>Phal.</i> Sea Bells x <i>Dips.</i> Neopolis	
I-Lan Beauty	<i>Dips.</i> Nobby's Purple x <i>Phal.</i> I-Lan Cinderella	
Kung's Blood Red	<i>Dips.</i> King Shiang's Rose x <i>Phal.</i> Yuda Blood Red	
NAME	PARENTAGE	REGISTERED BY
<i>DORTAENOPSIS (continued)</i>		
Kung's Dark Mary	<i>Dips.</i> Kung's New Mary x <i>Phal.</i> Sun Princess	
Kung's Dark Pixie	<i>Dips.</i> Kung's Dark Vicki x <i>Phal.</i> Carmela's Pixie	
Kung's Happy Beauty	<i>Dips.</i> King Shiang's Beauty x <i>Dips.</i> Kung's Happy Candy	
Kung's Happy Red Jewel	<i>Dips.</i> Happy Valentine x <i>Phal.</i> Hwaleng Redjewel	
Kung's No. 1 Delyan	<i>Dips.</i> Noble Stripes x <i>Dips.</i> Delyan	
Memoria Clifford Walters	<i>Dips.</i> Taisuco Okystripe x <i>Phal.</i> Taisuco Jimmy	
Olivia Karolina	<i>Phal.</i> Via Emiri x <i>Dips.</i> Happy Smile	
Pem's Margot	<i>Phal.</i> Brother Lawrence	
Pem's Necca	<i>Phal.</i> Fairy Tales x <i>Dips.</i> Sweet Strawberry	
Ruyu Angel	<i>Phal.</i> Rose Tris x <i>Dips.</i> Rong Guan Mary	
Ruyu Red Lip	<i>Phal.</i> Rose Tris x <i>Dips.</i> Sweet Strawberry	
Shih Hua Beauty-Yi	<i>Dips.</i> Ho's Mountain Girl x <i>Dips.</i> Hsinying Mount	
Shih Hua Rose	<i>Dips.</i> Shih Hua Rose x <i>Dips.</i> Taisuco Firebird	
Shine Jewel	<i>Dips.</i> Taisuco Beauty x <i>Phal.</i> Taisuco Rose	
Tai Lin Rose	<i>Dips.</i> Brother Cortez Red x <i>Dips.</i> Sogo Smith	
Tie Delyan	<i>Dips.</i> Kung's Valentine x <i>Dips.</i> Tai Lin Light	
Yuna Lee	<i>Dips.</i> Minho Princess x <i>Phal.</i> Olympia's Velvet	
	<i>Phal.</i> Brother Sandra x <i>Dips.</i> Hsin Barbie	
<i>DOSSINCHILUS</i> *		
Dreamcatcher	<i>Doss.</i> <i>marmorata</i> x <i>Anct.</i> <i>brevilabris</i>	
ENCYCLIA		
Alabel	<i>E. alata</i> x <i>E. belizensis</i> [<i>alata</i> ssp. <i>virella</i>]	
EPICATONIA		
Misaki Beauty	<i>Ctra.</i> Maul Maid x <i>Epi.</i> <i>mariae</i>	
Fuzzy Grapes	<i>Epi.</i> <i>melanopophyrea</i> x <i>Epi.</i> <i>ilense</i>	
GONGORA		
Eagle Wing	<i>Gga.</i> <i>atrappurpurea</i> x <i>Gga.</i> <i>chocensis</i>	
GOODISIA *		
Fandango	<i>G. pubescens</i> x <i>Lus.</i> <i>discolor</i> 'Dawsoniana'	
GRAMMATOCYMBIDIUM		
Australian Elegans	<i>Cym.</i> Kuranda x <i>Cram.</i> <i>elegans</i>	
HIMORIAIRA		
Brighton's Friendship	<i>Ascp.</i> Irene Dobkin x <i>Yasco.</i> Five Friendships	
ILONABA *		
Orchidom Crisp Blessings	<i>Rrm.</i> [Rdcm.] Blessings x <i>Gom.</i> <i>crispa</i>	
Orchidom Crisp Choice	<i>Rrm.</i> [Rdcm.] Choice Show x <i>Gom.</i> <i>crispa</i>	
IVANAG-4RA		
Cape Valentine	<i>Dial.</i> [CIL] Snowflake x <i>Blc.</i> Duckitt Beauty	
LAELIOCATANIA		
Humming Eva	<i>Lctra.</i> Roteva x <i>C.</i> Humming Bird	
Jane Austen	<i>Lc.</i> Tokyo Magic x <i>Ctra.</i> Why Not	
Roteva	<i>Lc.</i> Eva x <i>Ctra.</i> Keith Roth	
Unrequited Love	<i>Lc.</i> Puppy Love x <i>Ctra.</i> Capri	
LAELIOCATILEYA		
Dakao	<i>Lc.</i> Hirtatious Okami x <i>C.</i> <i>walkieriana</i>	
Higher Ground	<i>Lc.</i> Clar Hancock x <i>L.</i> <i>anceps</i>	
Intermagic	<i>C.</i> <i>intermedia</i> x <i>Lc.</i> Magic Road	
Melinda's Fantasy	<i>Lc.</i> Irene Finney x <i>Lc.</i> Maria Aparecida Barani	
Memoria Jeannette E. Harry	<i>Lc.</i> Melinda Rose Weber x <i>C.</i> Cynthia Martel Utado	
Mini Case	<i>Lc.</i> Wilfred Rives x <i>Lc.</i> Karl Lynn	
Misaki Bell	<i>Lc.</i> Pri Pri x <i>Lc.</i> Aloha Case	
Misaki Glow	<i>Lc.</i> <i>lipulana</i> x <i>Lc.</i> Empress Bells	
Noble's Charmed	<i>Lc.</i> <i>lipulana</i> x <i>C.</i> Tiffin Bells	
Noble's General	<i>Lc.</i> <i>purpurata</i> x <i>C.</i> General Cadorna x <i>Lc.</i> Beatriz Kunning	
Noble's Ornament	<i>C.</i> General Cadorna x <i>Lc.</i> Irene Finney	
Noble's Welcome	<i>Lc.</i> Lina Cavalleri x <i>Lc.</i> Maria Aparecida Barani	
Oriental Lady	<i>Lc.</i> Festival Queen x <i>Lc.</i> Melody Fair	
Payage	<i>Lc.</i> Sarah Leonard x <i>Lc.</i> Janet	
Schloaf Dragon's Tear	<i>Lc.</i> Spring Memory x <i>Lc.</i> Spring Squall	
Spring Parade	<i>Lc.</i> Spring Memory x <i>Lc.</i> Little Irene	
Suksan's Fancy	<i>Lc.</i> Mari's Song x <i>Lc.</i> Shelle Compton	
Torching Queen	<i>Lc.</i> Sedescombe x <i>Lc.</i> Shelle Compton	
Upstart	<i>Lc.</i> Rocket Sprite x <i>C.</i> Chocolate Drop	
Kung's		
NAME	PARENTAGE	REGISTERED BY
<i>DENDROBIUM (continued)</i>		
Magician	Den. Himezakura x Den. Silky White	
Michelle Flene	Den. Starlet Beauty x Den. Impact Stripes	
Modern Art	Den. Pink Rabbit x Den. Lucky Princess	
Newing Sunset Ray	Den. Golden Blossom x Den. Angel Flower	
Nicole Yoshikane	Den. Newlyn x Den. Kayla	
Oakwood's Wine	Den. <i>smillace</i> x Den. <i>goldschmidtianum</i> [miyake]	
Ohharano	Den. Thailand x Den. Burmese Ruby	
Oing Hock Chye	Den. Diamond Queen x Den. Doreen	
Pearl Heart	Den. [Doc.] Jiggi x Den. [Doc.] <i>striolatum</i> [striolata]	
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Uranos	Den. Super Chance x Den. White Princess	
Victory Road	Den. Victory Shuu x Den. Lucky Princess	
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Vivory	Den. Vivid x Den. Ivory	
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Chingruey's Lucky Girl	<i>Dips.</i> Hsin Lucky Girl x <i>Dips.</i> Luchia Davis	
Chingruey's Mary	<i>Dips.</i> Chin-Hsing Cherry x <i>Dips.</i> King Shiang's Beauty	
Chingruey's Phoenix	<i>Dips.</i> Tinny Phoenix x <i>Dips.</i> King Shiang's Beauty	
Chingruey's Princess	<i>Dips.</i> Taisuco Pixie x <i>Dips.</i> Minho Princess	
Chingruey's Red Candy	<i>Dips.</i> Taisuco Firebird x <i>Dips.</i> Taisuco Candystripe	
Chingruey's Romance	<i>Dips.</i> Taisuco Princess x <i>Phal.</i> Hsin Romance	
Chingruey's Treasure	<i>Dips.</i> Minho Candystripe x <i>Dips.</i> King Shiang's Beauty	
Chiu Ji Angel	<i>Dips.</i> Chiu Ju Queen x <i>Phal.</i> Mel Dar Lip	
Chiu Ji Beauty	<i>Phal.</i> Chiu Ju Queen x <i>Phal.</i> Ralph Wason	
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Formosa Princess	<i>Dips.</i> Formosa Rose x <i>Dips.</i> Minho Princess	
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Hampshire Sweetie	<i>Dips.</i> Tinny Honey x <i>Dips.</i> Hampshire Bulls-Eye	
Harbor Sunrise	<i>Phal.</i> Sea Bells x <i>Dips.</i> Neopolis	
I-Lan Beauty	<i>Dips.</i> Nobby's Purple x <i>Phal.</i> I-Lan Cinderella	
Kung's Blood Red	<i>Dips.</i> King Shiang's Rose x <i>Phal.</i> Yuda Blood Red	

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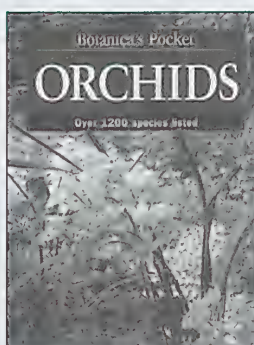
by Ross Macdonald

This is the sister volume to Cool Flowering Orchids throughout the Year. It is in the same format and style as the previous book, but also includes some genera that would require artificial heating in cooler climates. This volume covers a further 314 orchid species and hybrids with 344 colour plates. Both texts are highly recommend to all orchid fanciers; particularly newcomers who wish to see an array of delightful flowers that they could grow.

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COOL FLOWERING ORCHIDS THROUGHOUT THE YEAR

by Ross Macdonald

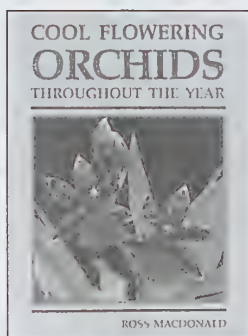
Ross Macdonald is a highly respected orchid grower and photographer from the North Island of New Zealand. This volume is devoted to cool growing orchid genera, which are easy to cultivate in New Zealand and southern Australia. Growers in tropical areas should not be discouraged, as many of these orchids are indeed adaptable and will grow in a range of climates. Andy Easton has written the foreword. Ross has devoted the first few pages of the book to cultural hints, which are down to earth and give practical information on the basics of orchid cultivation.

Basically this is a pictorial book with over 300 full colour photographs, covering a similar number of orchid species and hybrids. The quality of both the photographs and the colour reproduction is impressive. All of the orchids have been captured using available sunlight and there is no flash photography. There is a wide range of orchid genera covered with particular emphasis placed on cymbidiums, dendrobiums, laelias, masdevallias, the *Odontoglossum* alliance and *Paphiopedilum*.

The photographs are arranged in four chapters, referring on their main blooming season. The use of seasons ensures the text is also applicable to growers in the northern hemisphere.

This inexpensive book is exceptional value and importantly is written by someone who knows and grows these orchids. I thoroughly recommend this book to orchid growers, as it will be of great value to both novice and experienced enthusiasts.

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Edited by Alec Pridgeon

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The first section, by the General Editor, Alec Pridgeon, introduces orchid habitat, distribution, names and classification, hybrids, pollination, how to grow orchids and control pests and diseases, and orchid conservation.

The alphabetical section, "Orchids A-Z", includes descriptions, names and synonyms, geographic distribution, notes on culture, and photographs drawn from collections around the world, showing the best-known species in cultivation.

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NAME	PARENTAGE	REGISTERED BY
<i>PAPHIOPEDILUM (continued)</i>		
Paph. La Feugeral	Paph. Cadence x Paph. Pacific Ocean	E.Young O.F.
Lakota	Paph. Patemoster x Paph. Passion	E.Young O.F.
Lizard	Paph. Sioux x Paph. Hellas	Arnold J.Klehm
Lovely Inuyama	Paph. Alsea Heights x Paph. niveum	D.Eickhoff
Malcos	Paph. John Hanes x Paph. lemanium	G.Kimbura
Max Sandebichler	Paph. Robin T. Hall x Paph. Yalwin	S.Murakami
Medora David Hanson	Paph. Wacabore x Paph. lemanium	Yoshiharu Igarashi
Mesquaque	Paph. Kizilirmak x Paph. Pincuccio	G.Dermel
Midnight	Paph. Great Pacific x Paph. Buccaneer	S.Lawless(Orchid House)
Miyabi Queen	Paph. grimaldium x Paph. adductum	Arnold J.Klehm
Molly McBride	Paph. wilhelmiae x Paph. Red Rook	Schwendowich(O/U)
Mum Mal	Paph. wulphelmiae x Paph. Red Maude	Nizumi
Naoim's Catin	Paph. Miyabi Zen x Paph. White Queen	T.Tanaka
Naoim's Remorable	Paph. Yadorigi x Paph. deleranti	T.Larkin
Naoim's Refined	Paph. Jack Tonkin x Paph. Saint Ouen's Bay	N.Tannaci(Orchid Zone)
Naoim's Spot	Paph. malloperse x Paph. Double Trix	N.Taki
Nedra Coyner	Paph. Wallur x Paph. True Spirit	N.Taki
Nori's Bell	Paph. Michiru Sasano x Paph. Winston Churchill	N.Taki
Nori's Butter	Paph. Newmaker x Paph. Nature's Kin	N.Taki
Nori's Magic	Paph. Hamana Samson x Paph. Mimmoore	N.Taki
Nori's Song	Paph. Winston Churchill x Paph. Incredible Rose	N.Taki
Paula & Phil's Bride	Paph. Pacific Ocean x Paph. Junior World	N.Taki
Prayer Wheel	Paph. incantation x Paph. Tuxedo Junction	N.Taki
Richard Olson	Paph. bellatulum x Paph. Nonto Hasegawa	N.Taki
Rose Dream	Paph. Welleslyanum x Paph. Nanto Hasegawa	N.Taki
Rubylight of Inuyama	Paph. Joyce Hasegawa x Paph. malloperse	N.Taki
Saeiki's Challenge	Paph. Nonto Hasegawa x Paph. malloperse	N.Taki
Saint Anthony of Padua	Paph. Valdez x Paph. Patricia Elling	N.Taki
Saint Charles Lwanga	Paph. Double Bell x Paph. glaudulium [praestans]	N.Taki
Seven Mountains	Paph. insigne x Paph. King of Sweden	N.Taki
Shin-Yi Angel	Paph. Baroque x Paph. Personality	N.Taki
Shin-Yi Edward	Paph. Winston Churchill x Paph. New Direction	N.Taki
Shin-Yi Emerald	Paph. Hamana Wave x Paph. Pacific Ocean	N.Taki
Shin-Yi Flame	Paph. Sheba x Paph. Sea Cliff	N.Taki
Shin-Yi Flying	Paph. callosum x Paph. Laser	N.Taki
Shin-Yi Laser	Paph. Bournette x Paph. Keyeshill	N.Taki
Shin-Yi Mirage	Paph. Angel Hair x Paph. Saint Swithin	N.Taki
Shin-Yi Pie	Paph. Prince Edward of York x Paph. rolfschilidium	N.Taki
Shin-Yi Prince	Paph. Laser x Paph. Emerald	N.Taki
Shin-Yi Saint	Paph. Magic Flame x Paph. Lady Isabel	N.Taki
Silver Castle	Paph. Vanguard x Paph. Red Horizon	N.Taki
Skip The Buss	Paph. Sander's Pride x Paph. Sander	N.Taki
Steele Magnolia	Paph. Sander's Pride x Paph. Sander	N.Taki
Sunset of Inuyama	Paph. Sander's Pride x Paph. Sander	N.Taki
Taisuco America's Bordeaux	Paph. Sander's Pride x Paph. Sander	N.Taki
Taisuco America's Grand	Paph. Sander's Pride x Paph. Sander	N.Taki
Taisuco America's Limeade	Paph. Sander's Pride x Paph. Sander	N.Taki
Taisuco America's Matrix	Paph. Sander's Pride x Paph. Sander	N.Taki
Taisuco America's Primavera	Paph. Sander's Pride x Paph. Sander	N.Taki
Tatung Stronger	Paph. Sander's Pride x Paph. Sander	N.Taki
Triple Trix	Paph. Sander's Pride x Paph. Sander	N.Taki
Wild Peacock	Paph. Sander's Pride x Paph. Sander	N.Taki
Wossner Grunspicht	Paph. Sander's Pride x Paph. Sander	N.Taki
Wossner Panther	Paph. Sander's Pride x Paph. Sander	N.Taki
Wossner Vietnam Bell	Paph. Sander's Pride x Paph. Sander	N.Taki
Wossner Vietnam Gold	Paph. Sander's Pride x Paph. Sander	N.Taki
Yokobue	Paph. Sander's Pride x Paph. Sander	N.Taki
Yunklight	Paph. Sander's Pride x Paph. Sander	N.Taki
PARAVANDRUM		
Kyroski Hikawa	Ascda. Kwa Geok Choo x Pps. [Paph.] serpentilingua	
PHALAENOPSIS		
Abdon Tobia	Paph. Tarlac Bellina x Paph. amboinensis	

NAME	PARENTAGE	REGISTERED BY
<i>PHALAENOPSIS (continued)</i>		
Aventurine	Paph. Stone Huda x Paph. Taipei Gold	Yu Pin Biotech.
Anarches	Paph. Su-an Cricket x Paph. Penang Jewel	E.Young O.F.
Belle Angue Point	Paph. Micro Nova x Paph. Golden Pride	E.Young O.F.
Billy Wang	Paph. Black Ball x Paph. Ching Her Buddha	Wilson Ng(O/U)
Brecks Novapride	Paph. Ching Her Buddha x Paph. Ching Her Prince	R.Ang
Chinguey's Black Ball	Paph. Golden Pecker x Paph. Petite Snow	Brackridge
Chinguey's Black Gold	Paph. Brother Precious Stripes x	Ching Ruey Orch.
Chinguey's Black Sesame	Paph. Golden Sun x Paph. Chinguey's Blood-red Sun	Ching Ruey Orch.
Chinguey's Precious Blood	Paph. South Pacific Stripes x Paph. Chin Shang's Stripes	Ching Ruey Orch.
Chinguey's Precious Sun	Paph. Chinguey's Silk x Paph. I-Hsin Romance	Ching Ruey Orch.
Chinguey's Silk	Paph. Tain Mei Beauty x Paph. Chiu Jih Star	Ching Ruey Orch.
Chiu Jih Beauty	Paph. Chinguey's Diamond x Paph. Chiu Jih Sun	Ching Ruey Orch.
Chiu Jih Rose	Paph. Chiu Jih Spot x Paph. Golden Sun	Ching Ruey Orch.
Chiu Jih Star	Paph. Chiu Jih Princess x Paph. Chiu Jih Spot	Ching Ruey Orch.
Coral Music	Paph. Country Music x Paph. Coral Isles	Ching Ruey Orch.
Cosmo-Ginrei	Paph. Hakalau Queen x Paph. Ginrei	Porter's Orch.(O/U)
Deborah Dacumos	Paph. Rousserole x Paph. Little Netsuke	Kokusai
Delilah Salazar	Paph. Guadalupe Pineda x Paph. pulchra	W.Tippit
Doyen Durand	Paph. Saint Valentin x Paph. Line Renaud	C.G.Tobia
Frances Potter	Paph. Coral Music x Paph. Violet King	D.Pierrel
Fred's Canary	Paph. Golden Bell x Spotted x Paph. Brother Purple	F.J.Bergman
Fred's Cardinal	Paph. Fred's Buddha x Paph. Fred's Peppercot	F.J.Bergman
Fred's Cardinal	Paph. Golden Buddha x Paph. Brother Glamour	F.J.Bergman
Fred's Cardinal	Paph. Golden Buddha x Paph. Lee Kai Choon	F.J.Bergman
Fred's Cardinal	Paph. Golden Buddha x Paph. Brother Sally Taylor	F.J.Bergman
Fred's Cardinal	Paph. Brother Sally Taylor x Paph. Princess Kaiulani	F.J.Bergman
Fred's Cardinal	Paph. David Lim x Paph. Ambo Choon	F.J.Bergman
Fred's Cardinal	Paph. Brother Plum x Paph. Golden Buddha	F.J.Bergman
Fred's Cardinal	Paph. Melodious Bells x Paph. Classic Beauty	F.J.Bergman
Fred's Cardinal	Paph. Brother Gem x Paph. amabilis	F.J.Bergman
Fred's Cardinal	Paph. amabilis x Paph. Deventiana	F.J.Bergman
Fred's Cardinal	Paph. Hwating Redjewel x Paph. New Cinderella	F.J.Bergman
Fred's Cardinal	Paph. Llan Gold x Paph. Yungtho Celibz	F.J.Bergman
Fred's Cardinal	Paph. Golden Pecker x Paph. Llan Cinderella	F.J.Bergman
Fred's Cardinal	Paph. Penang Ruby x Paph. King's Ruby	F.J.Bergman
Fred's Cardinal	Paph. Penang Ruby x Paph. amabilis	F.J.Bergman
Fred's Cardinal	Paph. Yungtho Celibz x Paph. Princess Violet	F.J.Bergman
Fred's Cardinal	Paph. Yungtho Celibz x Paph. Tabasco Tex	F.J.Bergman
Fred's Cardinal	Paph. King's Vol x Paph. Pailang's E-Len	F.J.Bergman
Fred's Cardinal	Paph. King's Vol x Paph. Pailang's E-Len	F.J.Bergman
Fred's Cardinal	Paph. Timothy Christopher x Paph. Abendrot	F.J.Bergman
Fred's Cardinal	Paph. Bridesmaid x Paph. Yungtho Celibz	F.J.Bergman
Fred's Cardinal	Paph. Yuda Blood Red x Paph. Pailang's E-Len	F.J.Bergman
Fred's Cardinal	Paph. Pailang's Auckland x Paph. Auspice Red Wine	F.J.Bergman
Fred's Cardinal	Paph. Coral Isles x Paph. King's Vol	F.J.Bergman
Fred's Cardinal	Paph. Bridesmaid x Paph. King's Tradition	F.J.Bergman
Fred's Cardinal	Paph. King's Gelb Tex x Paph. King's Vol	F.J.Bergman
Fred's Cardinal	Paph. Llan Gold x Paph. Pailang's E-Len	F.J.Bergman
Fred's Cardinal	Paph. Callant Beau x Paph. Zuma Champion	F.J.Bergman
Fred's Cardinal	Paph. Be Tris x Paph. Rainbow Chip	F.J.Bergman
Fred's Cardinal	Paph. Brother Lawrence x Paph. Poppy Queen	F.J.Bergman
Fred's Cardinal	Paph. Goldiana x Paph. Sweet Revenge	F.J.Bergman
Fred's Cardinal	Paph. cornu-ervi x Paph. Kuntarati Rarashati	F.J.Bergman
Fred's Cardinal	Paph. Barbara Golden x Paph. Brother Oxford	F.J.Bergman
Fred's Cardinal	Paph. Frisson x Paph. Milva Sweet	F.J.Bergman
Fred's Cardinal	Paph. Raptigny x Paph. Camilla	F.J.Bergman
Fred's Cardinal	Paph. Cataracte x Paph. Malibu Imp	F.J.Bergman
Fred's Cardinal	Paph. Somenau x Paph. Pailang's E-Len	F.J.Bergman
Fred's Cardinal	Paph. Somenau x Paph. Pailang's E-Len	F.J.Bergman
Fred's Cardinal	Paph. Brother Lawrence x Paph. Pailang's E-Len	F.J.Bergman
Fred's Cardinal	Paph. Keith Poppy x Paph. Hakalau Queen	F.J.Bergman
Fred's Cardinal	Paph. Snow Leopard x Paph. Rousserole	F.J.Bergman
Fred's Cardinal	Paph. Hampshire Red Hot x Paph. Penang Girl	F.J.Bergman
Fred's Cardinal	Paph. World Class x Paph. Sheila McDaniel	F.J.Bergman
Fred's Cardinal	Paph. World Class x Paph. Florida Snow	F.J.Bergman
Fred's Cardinal	Paph. Golden Pecker x Paph. George's Seurat	F.J.Bergman
Fred's Cardinal	Paph. Sweet Dreams x Paph. amboinensis	F.J.Bergman
Fred's Cardinal	Paph. Sweet Memory x Paph. Catrining Silk	F.J.Bergman
Fred's Cardinal	Paph. White Ghost x Paph. Wedding Day	F.J.Bergman
Fred's Cardinal	Paph. Taisuco Korchian x Paph. Sogo Yukiidan	F.J.Bergman

NAME	PARENTAGE	REGISTERED BY	NAME	PARENTAGE	REGISTERED BY
<i>PHALANOPSIS (continued)</i>					
Tai Lin Queen	Phal. Sogo Yukidian x Phal. Taisuco Day	Discovery Biotech	POTINARA (continued)	Sic. Ann Komine x B. nodosa	R & M Gerber
Texas Fancy	Phal. Brother Fancy x Phal. Tabasco Tex	Mrs/Mrs J Brandenburg (Dr J.G. Martin)	Remar's Passion	Pot. Dal's Emperor x Sic. Jillian Lee	A.S.Eggins
Tiffany Coll	Phal. Fireberry x Phal. Taipei Gold	Mrs C.Coll	Rosella Memories	Bc. Maikai x Pot. Creation	G.Kimbura
Tzeng-Wen Moon	Phal. amabilis x Phal. Malaysia	Ching-Tien Wong	Shugetsu	Pot. Elegant Dancer x Bc. Rosa Galante	L.Juan Orch.
Valerie Ang	Phal. Hsi. Ching Her Goddess x Phal. Brother Love Sand	Ringke's Thompson(O/U)	Sweet Fruit	Pot. Sally Taylor x Pot. Elegant Dancer	F.Fordyce
Walnut Valley Goddess	Phal. White Face x Phal. Richard Shaffer	Taipei-Mich. Dream	Tzeng-Hung Beauty	Bc. Pamela Finney x Sic. Ken Dream	L.Juan Orch.
Wedding Day	Phal. Jasper Ayers x Phal. Frank Gottburg	Macara Orch.(A.Easton)	Tzeng-Hung Beauty	Bc. Raspberry Parlat x Sic. Ken Dream	F.Komyama
White Face	Phal. Cygnus x Phal. Taisuco Kochdian	Macara Orch.(A.Easton)	Venus Gen	Pot. Memorial Gold x Bc. Prada Green	L.Hung Orch.
White Galaxy	Phal. Opaline x Phal. Crystal Chanda Lear	Saeki Nurs.	Village Chief Beauty	Pot. Shinfong Purple x Bc. Guanmiao City	F.Komyama
White Ghost	Phal. White Moon x Phal. Sweet Cathrine	Macara Orch.(A.Easton)	Young Kong Gold	Bc. Prada Green Nation x Pot. Haw Yuan Gold	G.Kimbura
White Wedding	Phal. Carmela's Pixie x Phal. wilsonii	F.Glanz	PSYTONIA *		G.Kimbura
Wössner Mini	Phal. Salu Peoker x Phal. Ton Jy Gold	Yu Pin Biotech	Caribbean Jewels		M.H. Yang(R.Y.Chuan)
Yu Pin Leopard					J.R. Fernandez
<i>PHRAGMIPAPHIUM</i>					
Elisabeth Schruhl	Paph. dayanum x Phrag. Sedenii	J. Werner	RECCHARA	Smbc. Tzeng-Wen Bells x Bc. Chunyeah	Ching-Tien Wong
<i>PHRAGMIPEDIUM</i>					
Amur Fire	Phrag. Eric Young x Phrag. Barbara Leahn	Orch. by Ackers	BENACHILLUS *	Ren. bella x Sic. [Tzgi.] Iohariana	Singapore Bot. Gdns
Beauvalande	Phrag. Longwillie x Phrag. Eric Young	E. Young O.F.	Ricky Martin	Ren. philippinensis x Sic. [Tzgi.] Iohariana	Singapore Bot. Gdns
Bellozanne	Phrag. Longwillie x Phrag. Westmount	E. Young O.F.	Senior Minister	Rstp. sanguinea q x Rstp. guttulata	M.Ferrusi(F.Feysa)
Bouivout	Phrag. Hanne Popow x Phrag. Westmount	H.P.Norton	RESTREPIA	Aer. Bangkok x Rhy. gigantea	R.F.Orchid(P.Chanudomchok)
Charleston Sunrise	Phrag. Memoria Dick Clements x Phrag. Andean Fire	Owens Orchids	Frank Feysa	Odnra. Fiona Isler x Rst. [Odm.] rossii	R.L.Burkey(Keith Andrew)
Dorothy Yates	Phrag. Saint's Apprentice x Phrag. Saint Owen	Woodstream(A.Omeis)	RHYNCHORIDES	Rrm. [Rdcsm.] Mystique x Rrm. [Rdcsm.] Gusto	Kosaki Orch.
Fast Forward	Phrag. Cardinale x Phrag. Saint Peter	Woodstream(A.Omeis)	Norma	Tolu. [Ornc.] Elin Star x Rrm. [Rdcsm.] Mystique	Rex Foster Orchids
Glass Slipper	Phrag. Saint Owen x Phrag. Saint Peter	Woodstream(A.Omeis)	RHYNTONOSSUM *	Pot. Edwin Hausermann x Epi. [E.] phoenixcum	Rex Foster Orchids
Holy Smoke	Phrag. Saint's Apprentice x Phrag. Saint Owen	Woodstream(A.Omeis)	Flirty Frocks	Lc. Memoria Buddy Clark x Roth. Magic Wand	
Hot Pursuit	Phrag. Cicola x Phrag. Saint Owen	Woodstream(A.Omeis)	Pettie Damsel		Down Under N.O.
Imagine	Phrag. pearcei x Phrag. Robert Palm	M.Ledoux	Valentine's Masquerade		P.C.Elileet
Knick Knack	Phrag. schlimii x Phrag. Barbara Leahn	M.Ledoux	ROTHARA	Sarco. [Prids.] Bobby-Dazzler x Sarco. Fitzhart	A.S.Eggins
Lynn Evans-Goldner	Phrag. longifolium x Phrag. Robert Palm	M.Ledoux	Magic Wand	Sob. macrantha x Sob. Mirabilis	N.Taki(Yoshitaka Yamamoto)
Patty Whak	Phrag. Sorcerer's Apprentice x Phrag. Robert Palm	M.Ledoux	Royal Symphony	Sic. Dal's Good One x Sic. Royal Beau	T.Hotta
Prince Caspian	Phrag. Bessage x Phrag. Robert Palm	M.Ledoux	SARCOCHILLUS	Sf. Isabelle Stone x L. milleri	T.Hotta
Robin Redbreast	Phrag. Mont Fallu x Phrag. wallisii	Woodstream(A.Omeis)	Marcia Who	Sf. China Sky x L. punilla	T.Hotta
Rumplestikins			SOBRALIA	Sf. Layla x S. coccinea	T.Hotta
Sorcerer's Fire			Songbird	Sf. Layla x L. punilla	T.Hotta
<i>PLEUROTHALLIS</i>					
Salsax	Pths. ruberrima x Pths. nassax	Hoosier(Glicenstein/Hoosier)	SOPHROCAATILEA	Sf. Clafouti x C. Walkerinter	T.Hotta
<i>POLYSTACHYA</i>			Rosella Beau	Sf. Trick or Treat x Sic. N. Buddy	W.H.Beebe
Cape Gold	Pot. Rodney Ellis x Pol. paniculata q	Duckitt	SOPHROLAELIA	Sic. Ten-s-Jewel x C. Horace	W.H.Beebe(McCully)
Cape Valentine	Pot. vulcanica x Pol. valentina	Duckitt	Adiaia	Sic. Little Red Seagull x Sic. Love Castle	T.Hotta
Frieda's Gem	Pot. Frieda's Favourite x Pol. longiscapa q	Duckitt	Cherry Beebe	Sic. Skywalker x Sf. Little Red Seagull	T.Hotta
<i>PONEROSTIGMA</i>			Josephine Caswell	Sic. Dal's Buddy x Sic. Dal's Good One	T.Hotta
Wakkawa-chidori 2	Amii. gracile x Pnr. kurokamiana	M.Wakikawa	Little Sky	Sic. Aloma Jewel x Lc. Trick or Treat	A.S.Eggins
<i>POTINARA</i>			Memoria Cynthia Eggins	Sic. Naomii's Tender Heart x Sic. Fairyland	Lien Chin Hung
All My Silk Doll	Pot. Kozo's Scarlet x Bc. Pastoral	S.Maki	Misaki Fairy	Lc. Naomii's Tender Heart x Sic. Million Kiss	N.Taki(Yoshitaka Yamamoto)
Asheley Harry	Pot. Carolina Splendor x Bc. Memoria Susan Hawkins	P.Harry	Panache Brilliance	Sic. Tangerine Jewel x Lc. Panache Classic	Rex Foster Orchids
Aztec Scarlet	Bc. Honolulu Sunset x Pot. Carolina Splendor	P.Harry	Rosella Ruby	Lc. Dubescens x Sic. Love Fresh	A.S.Eggins
Aztec's Red Beauty	Pot. Carolina Splendor x Bc. Cardad Dorwelo	P.Harry	Spicy Hot	Sic. Little Rose x S. coccinea	F.Fordyce(O/U)
Bambooleo	Bc. Ports of Paradise x Sic. Amaliro	G.Kimbura	Yellow Warbler	Sic. Love Fresh x S. cernua	Hoosier(Glicenstein/Hoosier)
Candy Pop	Sic. Penny Kurda x Pot. Creation	G.Kimbura			
Cape Canby	Pot. Carolina Splendor x Bc. Owen Holmes	P.Harry	SPATHOGLOTTIS		
Chihiro Nakae	Pot. Shinfong Purple x Bc. Chia Lin	P.Harry	Yellow Belle		
Chuan Tung Wish	Pot. Kat Green Power x Pot. Haw Yuan Gold	S. Okuno	STANGORA		
Cosmo-Canary	Pot. Little Toshie x L. aurea (rubescens 'Flavo')	Ts. Hsiang Liu	Ombelle d'Automne		
Hsiangyung Pachi Pachi	Pot. Haw Yuan Gold x Bc. Rattanakosin	Kokusai	STENOSARCOS		
Huatand Boy	Bc. Tzeng-Wen Beauty x Bc. Haadyai Delight	Ching Hua	Hoosier Cardinal		
Huatand Sun	Bc. Tzeng-Wen Beauty x Sic. Kaula Starbright	Chih Cheng Chen			
Huatand Virgin	Bc. Tzeng-Wen Beauty x Pot. Love Call	Chih Cheng Chen			
Jarak Delight	Bc. Haadyai Delight x Pot. Thi-Ti	K.Somboonphon			
Long Life Star	Sic. Golden Sparkle x Pot. Thi-Ti	Long Life(USA)			
Long Life Star	Pot. Beauvalande x Sic. Hazel Bodor	T.Nakama			
Lower's Lane	Pot. Beauvalande x Bc. Princess Masako	T.Nakama			
Memoria Fumi Nakama	Pot. Elegant Dancer x Bc. Princeps	Chi Cheng Tsai			
Memoria Hiroshi Nakama	Pot. Elegant Dancer x Lc. Frank Lloyd Wright	N.Taki(Yoshitaka Yamamoto)			
Memoria Tsai Tien-Shou	Pot. Haw Yuan Gold x Bc. Shinfong Luoyang	S.Barani			
Misaki Gold	Bc. Vicky Nazareno x Sic. Beaufort	F.Fordyce			
Noble's Diva	Pot. Orquidacea's Glory x Bc. George Suzuki	G.Kimbura			
O'neone Circle	Sic. Circle of Life x Bc. O'neone	C.Holm			
Orion Moon	Sic. Waikiki Gold x Pot. Sweet Sugar				
Parga Sun	B. maritima [arnazonica] x Sic. Golden Acclaim				

NAME	PARENTAGE	REGISTERED BY
TOLUMLAIA Jarak Rainbow	Tolu. [Onrc.] Tsiku Vanessa x Tolu. [Onrc.] Catherine Wilson	K.Somboonphon
VANDA Brighton's Pride Fred Xerri Mines	V. Doctor Anek x V. Robert's Delight V. Darres' Golden Heritage x V. Bangkhunsri V. Mevr. L. Velhuis x V. Tan Chay' Yan V. Kuitana Delight x V. Doctor Anek V. Josephine van Brero x V. Somst Pink	Brighton Orch. Brighton Orch. Lim Kong Wing (Lum Chin Orch.) V.Fowler(O/U) Singapore Bot.Gdns
VERAMAYARA * Beverston Court	Zba. [Zcx.] Amesianus x Psnth. Wyld Court Beauty	R.Stevens(George Black)
VUJLSTEKEARA Jerry Lawless	Vujl. Memoria Mary Kavanaugh x Oda. Jubilee Volunteer	G.Lawless(Golden Gate)
WAILAIARA Abu Bakar	Lwrra. Fatimah Alsagoff x Vasco. Chili Padi	Tan Chin Heong
WILSONARA Keith Moon Kiwi Day Lawless Tristan Promising Cold Rustic Magic	Wils. Spaceman x Oda. Drummer Boy Wils. Nicola lane x Odm. Strophoon Oda. Remembrance x Wils. Firecracker Wils. Kendrick Williams x Odcdm. Tiger Hambrühren Wils. Sophia Ilse x Oda. Ray Buckman	R.L.Burkey R.Tucker(A Day) G.Lawless(Golden Gate) G.Day(A Easton) H.Liebman
WISEARA * Dale	Angrst. Flamenco x Xyl. bractescens ♀	E. & D.Wise
ZELENKOCIDILUM * Orchidom Princess	Zed. [Onrc.] Princess Midas x Onc. viperinum	W.Savage
ZYGOLUM Louisendorf	Zgpm. fabiosum x Z. Artur Elle	Hoosier (B.Holm)
ZYGENERIA Black Magic	Z. Artur Elle x Zgr. Adelaide Meadows	D. & T.Kennedy(Brookside Chs.)
ZYGNISIA Murasakiomachi	Zrs. Roquebrune x Agn. cyanea	G.Kimbara
ZYGOPASTIA Siwi River	Z. River Murray x Zba. [Zcx.] Elfin Jade	R.Tucker
ZYGOPETALUM Black Plague Blue Bear Siwi Black	Z. Alexis Linder x Z. Blackii Z. Titanic x Z. Millie Z. Memoria Grace Drewry x Z. Artur Elle	Hoosier(E.Michel) Hoosier(Orch. Los Osos) R.Tucker

Reprinted from 'The Orchid Review' (U.K.)

George W. Knight, One of Victoria's Earliest Orchid Growers*

by Greg Campbell, Gerald McCraith and Brian Milligan

Sir Frederick Sargood is believed to have assembled the first major collection of orchids in Australia at Ripponlea (his estate at Elsternwick, a Melbourne suburb) in 1883. His interest in orchids was sparked by a visit to England in 1880-1882. Not only did he return to Melbourne with a large collection of orchid plants but he also 'imported' two trained gardeners to care for them!

It now appears that George W. Knight, City Surveyor at Sandhurst (Bendigo), also accumulated a substantial orchid collection, beginning in 1884. Knight's copy of the fifth edition of B.S. Williams's *The Orchid-Grower's Manual*, published in 1877, has recently been found. Not only did Knight inscribe his name in the frontispiece of his copy but he also noted in the margins the orchids that he had acquired and when they first flowered in his collection.

Knight's notes indicate that he acquired his first orchids (seven species and two hybrids) during 1884, followed by at least a further 46 orchids the following year (other entries list only the date of flowering, not of purchase). A total of 89 orchids were marked altogether. Four of Knight's first orchids, acquired in 1884, were paphiopedilums, then known as cypripediums. Two (*Paphiopedilum concolor* and *P. niveum*) were species, while the other two were hybrids (*P. Dominianum* and *P. Harrisianum*). His *P. concolor* produced four flowers in 1888, while *P. niveum* had three, results that would delight most modern growers. He also purchased two odontoglossums (*Odontoglossum hallii* and *O. rossii*, now *Rhyncostele rossii*) in 1884 but there is no indication that either had flowered.

Knight grew four cattleya species and must have been especially pleased with his plant of *Cattleya mossiae* 'albo-marginata', as (according to his note in the margin) its flowers measured 7.5 x 7 in. Considering Bendigo's hot summer weather, he did well to flower *Odontoglossum crispum* in 1888, when it displayed its "beautiful pure white blooms" during the entire month of August. Another orchid that deserved special mention was *Odontoglossum citrosimum* (now *Cuitlauzina pendula*), which in December 1888 produced flowers that were "lovely, large white, of great substance, (and) highly perfumed".

A note in the margin reveals that Knight's plant of *Trichopilia suavis* produced twenty blossoms in late August 1888, while his *Sophranitis grandiflora* (now *S. coccinea*) also flowered in August of the same year.

We know that George Knight purchased some of his orchids from William Bull's Establishment for New and Rare Plants of

the King's Road, Chelsea. Bull's nursery was one of the three great orchid nurseries of the era, the others being Sander's of St. Albans and Veitch's of Chelsea. Bull imported plants from Africa, India, Japan and North America, and commissioned Edward Shuttleworth and John Carden to collect for him in Colombia. He was one of the first sixty chosen by the Royal Horticultural Society to receive the Victorian Medal of Honour commemorating Queen Victoria's jubilee in 1897.

A letter written by William Bull was found sandwiched in the pages of Knight's copy of *The Orchid-Grower's Manual*. Dated 28 October 1885, it reads (in part): "Your letter of the 15th August duly reached me and I have now forwarded by P & O 'Carthage' a case containing the *Saccolabiums* as per enclosed invoice. I have sent two extra strong plants of *Cypripedium caudatum* and *C. caudatum* roseum and charged half price for them. I have also sent extra strong plants of the two others that failed." Three of the *saccolabiums* that Knight ordered are now known as *Ascocentrum ampullaceum*, *A. curvifolium* and *Rhyncostylis gigantea*, while *Cypripedium caudatum* is now called *Phragmipedium caudatum*. It's surprising that so few of Knight's purchases died in transit, which would have taken about two months, as calculated from the above dates.

George Knight was born in London in 1831. He qualified as an architect and practised as a civil engineer before coming to Australia with a younger brother in 1854. After arrival in Victoria he was appointed Government Engineer and supervised the construction of a railway line to Williamstown and the Sunbury section of the main railway line to Bendigo. Subsequently he established a vineyard at Sunbury but soon sold it and moved to Bendigo, where he

held the position of City Surveyor until retiring in 1886. During that period he established nurseries, vineyards and orchards on four different sites in and around Bendigo, trading as the Knight Brothers.

The Rosenberg nursery at Back Creek was established on former gold diggings only after the whole site was turned over to unearth the fertile soil and to bury the clay and gravel that the miners had brought to the surface. One of the most noteworthy plants at this nursery was a rose 'bush' measuring 19 m long, 13 m wide and 4 m high! Another was the 'Grand Centennial' grape vine, bred from a Waltham cross, that yielded grapes measuring 35 mm long and 28 mm in diameter. It won a silver medal for "the newest and finest grape variety raised in the colony" at the Melbourne Centennial Exhibition in 1895.

At the Williamson Street nursery Knight built a conservatory measuring 40 m long x 7 m wide, reputedly the largest in the colony at that time. In 1895 he was said to have one of the largest orchid collections in Australia, comprising over 400 species, including a large shipment recently arrived from New Guinea.

William Knight was a Fellow of the Royal Horticultural Society of Victoria and served as a Justice of the Peace and Magistrate in Bendigo for over fifty years. He died in 1923, aged 93 years.

Acknowledgements.

We thank Mr. Darren Wright of Bendigo for lending one of us (GC) George Knight's copy of the fifth edition of *The Orchid-Grower's Manual*, and Mrs. Helen Mainka of the Bendigo Historical Society for her research.

* Part of an Australian Orchid Foundation study of early orchid growers in Australia.

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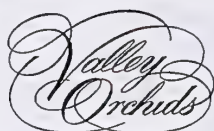
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AOR 119

Australian Natives

Increasing electricity costs, no rain and extended water restrictions means that cool growing natives have just become an even better option for orchid growers in NSW.

Cool growing natives are an attractive group. Not only do they have relatively low water requirements but ongoing breeding has introduced some of the showiness of the tropical species into hardy, cool tolerant natives. I stress tolerant here as they are not resistant to temperatures much below 0°C for extended periods. They will tolerate the occasional frost, provided they are well protected by trees or shade cloth and the frost doesn't settle on the leaves. They will not survive a lot of heavy frost or snow. One way to protect orchids from the cold of frosts is to keep them fairly dry. Easy, when there's no rain and water restrictions.

Winter is usually a quiet time for growers as they sit back and watch the flowers develop, but this year there is the added concern of continuing drought. This means growers will have to start thinking seriously about where they are going to get adequate water from next summer. Will tanks be enough? Can you even fit one in? Is it time to look at finer potting media? (Now is the time to prepare it ready for repotting as soon as the blooms fade.) Maybe even a change in the type of plants you grow. Terrestrials don't need summer water as they die back to tubers!

Consider modifications to your growing area. Look at the microclimate and take steps to increase the humidity and maybe shade. Introduce ponds or open tanks of water to increase humidity levels amongst the plants. Use fish to keep mosquito levels down. This means you will have to be careful what you spray with, but it's healthier in the long term. Close in walls facing inland to stop hot, drying winds from stripping out moisture. Maybe use climbing plants over part of the growing area to provide shade and protection. Ferns and foliage plants growing under benches can help, preferably in the ground, but in big tubs if you have a concrete jungle under there. Get started now so it is established by summer.

Mounted plants are always a challenge to keep damp enough. Fortunately, many need to be mounted because they don't like their roots being wet, but there are some such as *Sarochilus falcatulus* which don't like to dry out. In general, mounted plants like air movement around their roots and room for the roots to run, rather than being confined to pots. Maybe try sharing orchid mounts with some of the epiphytic ferns that occur with these species in their natural habitat. Epiphytic orchids are rarely seen as individual plants but rather as part of a big clump of ferns, moss, leaves and roots, often hanging over creeks.

In the heated house there is now even more reason to look at management more closely. Just what are you growing? Plants from monsoonal regions expect a dry season, and this is easiest to do in winter as dry plants are less prone to damage from the cold. This is the time of the dry season anyway. But if you are growing the small and very beautiful plants from moss forests and rainforests of northern Australia and New Guinea you will need to take care with their microclimate. It needs to be both warm and moist. Study what you can of the natural habitat of the plants you grow. Dividing the growing area and grouping plants

according to their requirements will make care easier and improve the growth and blooms of the plants.

Heating costs can be reduced by taking care that the vents seal properly and that there are no other leaks. Big tanks of water act as heat banks and help stabilise the temperature. Warm sunny days allow them to heat up and they then cool more slowly than the air. Maybe even look at solar heating though black plastic irrigation pipes over the roof of the structure. Pump water slowly through them from the tanks. There looks like being plenty of sunshine.

On top of all this extra concern about water and electricity there are the usual winter tasks such as looking at your plants to see if they are thriving, but with added possibilities for the causes of problems. Any weak plants could be due to water stress along with the usual culprits of root eating pests which will possibly be more common as the potting media dries out a bit, or fungal disease from inadequate air movement due to finer media getting too wet in rain.

Now is the time to wash pots and prepare media for spring repotting. Consider if you want to use finer media to hold more water. Look carefully at what you add to be sure it won't hold fertiliser as salt build up; or break down too quickly and become mush, or simply be toxic to native orchids. Start with a finer grade of pine bark and ask other growers what they have tried. Trial radically new media on a group of plants that are not so important in case it is unsuitable, remember that every grower's conditions are different. What works for someone else may not work for you. ■

Cattleyas

During winter there is very little you can do to these wonderful plants. If you are fortunate enough to have a heated glass house set the thermostat at ten degrees celsius. At this temperature the plants will come into growth when the days become longer a lot quicker than if the plants were grown outside. This does not apply if you are lucky enough to live up in the Northern States. If your plants have to grow in a shadehouse in the southern states, try to keep the plants as dry as possible. While plants are semi dormant, nutrients are not really needed.

Black rot in bulbs has been a problem this year. AGRIFOS 600 used monthly can be used to help control this fungus. Many growers still like to use FONGARID®. The sad news is that FONGARID® is going off the market. For the correct rate of drench for the different size pots see ALAN'S PEST and DISEASE HANDBOOK. For total control the correct rate is essential.

Scale insects still seem to be a problem. Spray with one of the oils such as PEST OIL® or ECO OIL, maybe you could use ANTI-SCALE® or MALASCALE®. ■

Cymbidiums

By now we are seeking some beautiful blooms. We certainly see the best blooms from the end of June into August. Staking is critical during this period. Keep plants just moist – not over wet. You will need to water weekly. If you flower your plants in a heated house, keep the night temperature at ten degrees Celsius. Circulation fans are essential.

Watch for snails. They can spoil a spike overnight! Place a few pellets in each pot for protection. If you get cold, wet days Spotting could be a problem. ROVRAL AQUA FLO® has been used to help control spotting. Use as a mist not a spray for best results.

Keep your nutrients up to your flowering plants. Use PETERS EXCEL HI "K", CAMPBELL'S YELLOW or the now famous MERRI FERT. It is a good idea to alternative one of the above with K-D-L to improve colour and size to the blooms. ■

Paphiopedilum

Paphiopedilum hybrids are well into their flowering season. Most of the whites and early greens will be in flower, together with some of the coloured varieties. Many of the modern hybrids, particularly those with spotted flowers, will not flower until spring. Flower quality depends upon several factors; those under your control at this time of year are watering, feeding, staking and light.

During winter paphiopedilums do not require frequent watering. Whilst the actual frequency will depend upon the weather, the type of housing and the state of the potting mixture, you must resist the temptation to pick up the hose unless the plants are moderately dry. When you do water, water early on a sunny day and water thoroughly. After every third or fourth watering allow the plants to drain for half an hour or so and then water with weak Aquasol (about half strength). Staking is important if you want to avoid asymmetrical flow-ers. Try to encourage the stems to grow upright from the start. You will be able to support the growing stem with a loose tie a couple of inches or so below the bud. When the stem is fully grown and the bud is about to open, lean the pot forward about fifteen degrees or so and keep it in this position until the flower has been open about a week; this will cause the flowers to "look up" a little.

Adequate light is very important for quality flowers. If at all possible, the amount of shading should be reduced considerably from mid-May until early September. This will result in larger, brighter flowers and longer – yes, longer – stronger stems; the plants will also benefit by continuing their growth cycle, albeit at a slower rate, through the winter months.

Although potting is best left until spring, any plant which is not doing well should be repotted

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AOR 165

into fresh mixture as soon as it is noticed, no matter what the season. If the roots have rotted away, dip the "bare rooted" plant in Fongarid and stake it firmly.

As a general rule the green-leaved hybrids can be grown quite well in cold conditions provided they are protected from heavy frost. Those with heated glasshouses do not need more than about six degrees centigrade, although young seedlings will benefit from somewhat warmer conditions. Maudiae types are really warm growers and require about fifteen degrees to do well.

Phalaenopsis

Winter is now upon us. Set your heater thermostat at 18 degrees Celsius. If you can afford it – an extra degree or two will increase spike length, flower count and size. By increasing night heat, you may upset your plants growing cycle, that is night temperature can be higher than day temperature.

Phalaenopsis can take more light during the winter period. Low light conditions mean soft plants!

Keep air moving once you turn on your heaters. This is necessary to help control botrytis spp. If spotting is a problem, you have a cultural problem.

Watering may have to be increased once you turn your heaters on as the extra heat will dry your plants out, so watch your humidity. Misting with a FOGGIT helps. Watch for bacterial spot. To clean up this disease spray with HYSAN® or now you can use VIBREX FLORA. If using VIBREX,

read the instructions very carefully as it has to be activated with CITRIC ACID.

Phalaenopsis mites have been a problem this year. One sees plants in shows that are covered in mites. Control is very difficult as most acaricides do not control this little mite. If plants are not in bloom, ECO OIL® will help keep them under control.

Vandaceous

Watering: – Cut back on watering during cooler months. Depending on local conditions, a good watering every three days should be sufficient. Water only in mornings. Avoid watering at all on cold or bleak days.

Light: – Strap leaf vandas and ascocendas require 50% shade. If you wish to move narrow leaved vandaceous plants (i.e. terete and semi-terete vandas, Mokaras, Arandas, etc.) from a shade house to full sunlight, then now is a good time to move them.

Fertiliser: – Reduce fertilising to once per fortnight alternating between –

(1) Inorganic low nitrogen – Campbells A, Flowfeed HP8, Aqua K or Phostrogen.

(2) Wuxall, Nitrosol or Fish Emulsion.

Pest Control: – Spray with a fungicide every 6 weeks e.g. Daconil, Ridomil MZ WP, Mancozeb or Wettable Sulphur.

If insects or scale are a problem spray with Diazanot, Malathion or Pyrethrum.

Watch for mite damage (i.e. Red Spider, false spider, etc.) and treat with a miticide such as Kelthan or Tedian.

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Cymbidiums

KING OF THE ORCHIDS
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Editor's Report

Included in the items making up this issue of *Cymbidiums Australia* are a variety of features relating to the 2004 National Cymbidium Show to be held at the Sunnybrook Hotel & Convention Centre at Warwick Farm in New South Wales.

Leon Van Rijn of Fleurijn Orchids-Holland is well known to many *Cymbidium* enthusiasts, particularly in South Australia and Victoria, and has been an active supporter of the National Cymbidium Show for several years now as well as being Patron of the Cymbidium Club of South Australia.

Doctor Tay has been a long term supporter and benefactor as well as an active member of the Cymbidium Club of Australia (NSW) for a number of years and, together with Fleurijn Orchids-Holland and the Sydney Orchid Centre, are providing the major sponsorship necessary to successfully stage a prestigious show such as the National Cymbidium Show has become.

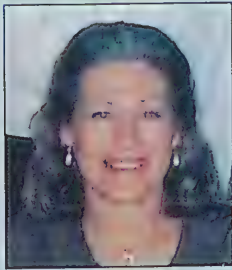
Unlike the all-pervasive sponsorship which seems so necessary to the staging of the event these days, the support provided by these companies is not just of the monetary kind aimed at securing a return in terms of financial or business advantage, but also extends to a genuine interest and participation in the success and development of our *Cymbidium* clubs, the national show concept, and the future of cymbidiums.

Editorial Panel



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Both men are keen *Cymbidium* enthusiasts as well as businessmen and gain enormous pleasure from their involvement with cymbidiums, and isn't the pleasure derived from these wonderful orchids the reason we are all drawn to them when it comes down to it?

Also included in this issue is a report from the CCSA's Registrar of Judges, Alec Canala, featuring the winners and cymbidiums of interest from that club's Spring Show in 2003.

The CCA(NSW), host state of the 2004 National Cymbidium Show, brings us the show schedule for what is shaping up to be yet another must-see *Cymbidium* event, and for those who may be travelling in this great country of ours during the show season, or simply can't get enough of seeing quality cymbidiums, we have a list of the major *Cymbidium* shows from all Australian Cymbidium Society states.

Dean Roesler continues his mammoth undertaking profiling the beauty of *Cym. suave* hybrids in a series which is now close to finalisation.

Rob Smith provides a look at some of the progeny resulting from Geyserland Orchids breeding, as flowered in a hobbyist's collection over the past few years and, to wrap up this issue, Dean Roesler brings the results of the Cymbidium Club of South Australia's Cymbidium of the Year competition voting.

Noe Smith
Editor

HOW TO JOIN A CYMBIDIUM CLUB IN YOUR STATE

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Meetings are held on the 2nd Thursday of each month (except December, January and February)

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Main Meeting commences 8.00 p.m.

Venue: Burnside Community Centre,
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Cymbidium Club of South Australia 2003 Spring Show

Text by Alec Canala – photography by John Seidel

The members of the Cymbidium Club of South Australia staged a most successful show from the 17th-23rd August. Held in the Westlake Shopping Centre mall, the 2003 show continued a long-time association with the centre, both as venue and major sponsor. Both Westlake and Neutrog Australia Pty. Ltd. (CCSA's other sponsor) were most pleased and impressed with the 15 displays and approximately three hundred plants for judging which made up the show and provided a riot of colour dispersed throughout the shopping centre.

With the addition of two new colour classes and the adoption of the now nationally incorporated fourth class for small standard type cymbidiums 85mm-100mm (with large flower types now being 100mm and above), the task of judging the exhibited plants was made much easier. Members from all divisions displayed a good mix of well-known and proven clones and exciting new seedlings, with many outstanding exhibits offering great potential for the future.



Cym. Fairy Rouge 'Lavender Falls'.

Champion First Division was Ben Knobben's plant of *Cym. Fairy Rouge 'Lavender Falls'*. This lovely purple miniature had many pendulous spikes and was presented in excellent condition. Congratulations to Ben.



Cym. Kirby Lesh 'Lonsdale'.

Grand Champion, Champion Large Standard and Champion Open Division was *Cym. Kirby Lesh 'Lonsdale'*, a beautiful shapely pink with darker pink/red spotting and striping on tall, upright spikes. This plant, well grown and presented by Moss and Rosemary Bray, which had been awarded an HCC previously, was repointed and received an AM as it had improved in shape and size. Congratulations to Moss and Rosemary.



Cym. Royale Fare 'No. 5'.

Champion Second Division was *Cym. Royale Fare 'No. 5'*, a green large standard with strong upright spikes, was exhibited by Paul Canala (a 15-year old Junior member). The plant was well grown and presented. Well done, Paul!

Champion Small Standard, also from Moss and Rosemary Bray, was *Cym. (Khan Flame x Valley Regent)*, a lovely shapely brown on upright spikes.



Cym. Lancashire Ruby 'Paradisla'.

Champion Intermediate was *Cym.* Lancashire Ruby 'Paradisla', a shapely red on upright spikes owned by Moss and Rosemary Bray.



Cym. Barossa Ruby 'Rejoice'.

Champion Miniature and Champion Miniature Specimen, well grown and presented by Murray Weston, was *Cym.* Barossa Ruby 'Rejoice', a very shapely red on tall, upright spikes.



Cym. (Valley Gratitude x Red Valley).

Champion Seedling and Champion Small Standard Seedling, exhibited by Peter Close, was *Cym.* (Valley Gratitude x Red Valley), a beautifully-shaped pink with a red barred lip displayed on an upright spike. I look forward to seeing this orchid on a bigger plant!

Champion Large Standard Seedling was *Cym.* (Red Beauty x Lovely Angel), a mid-pink on an upright spike, owned and exhibited by Moss and Rosemary Bray.

Champion Intermediate Seedling, *Cym.* (Amesbury x Pearly Queen), a green with an upright spike was exhibited by Helmuth Gerber.

Champion Miniature Seedling was *Cym.* Marilyn Levy 'Choppy', a shapely red/brown on a semi-arching spike and exhibited by Paul Canala.



Cym. (Hazel Tyers x Pink Champagne) = Vintage Champagne.

Champion Standard Specimen was Moss and Rosemary Bray's *Cym.* (Hazel Tyers x Pink Champagne) = Vintage Champagne, which carried many soft pink blooms on tall, upright spikes.

Champion Intermediate Specimen was *Cym.* One Tree Hill 'Purity Girl', a lovely striking yellow also owned by Moss and Rosemary Bray.

Champion Novelty was Moss and Rosemary Bray's *Cym.* Forrest Place 'Queen's Jewel', a very shapely spotted standard.

The following three plants were judged in the first shown hybrid classes for plants that have been previously flowered but have not been exhibited before:



Cym. Lancashire Khan 'Noarlunga'.

Champion First Shown Hybrid and Champion First Shown Small Standard was won by *Cym. Lancashire Khan 'Noarlunga'*, a very shapely purple/mauve owned by Moss and Rosemary Bray.

Champion First Shown Large Standard was *Cym. Julie Hawkes 'Big Boy'*, a large buff/pink also owned by Moss and Rosemary Bray.

Champion First Shown Intermediate was *Cym. (Sarah Jean x Pure Queen) 'Christine'*, a shapely green pure colour on tall, upright spikes and owned by Alec Canala.

A total of 15 displays were exhibited by members who did an excellent job with their presentations and the winners were:



Grand Champion Display.

Grand Champion Display and Best Display of 31-50 Plants were jointly won by Ben Knobben and Max Kahlbaum.



Reserve Champion Display.

Reserve Champion Display, Best Display in Open Division and Best Display of Over 50 Plants were won jointly by Moss and Rosemary Bray, Vic Haskard and Murray Weston.

Best Display in Second Division and Best Display of 6-15 Plants was won by Paul Canala.

Best Display of 16-30 Plants was won jointly by Geoff and Lucy Spear, and Peter Close.

Congratulations to all these winners, and to all members who exhibited plants and put in displays – it all went toward making it a very good show.

Alec Canala
Registrar of Judges
CCSA

A Snapshot of some Geyserland Hybrids

Text and photography by Rob Smith

Throughout the 1990's, Geyserland Orchids of New Zealand played a prominent role in the *Cymbidium* scene in Australia. Through his Geyserland nursery, Andrew Easton was one of the most prolific producers of *Cymbidium* hybrids across all size ranges and types. With several large nurseries across the country acting as agents and including his hybrids in their catalogues, Australian *Cymbidium* growers have been exposed to literally hundreds of his crossings. With many of the last crosses Mr Easton made prior to his closing the Geyserland nursery and moving to the USA still to flower, his contribution to cymbidiums in Australia con-

tinues and, with many hybridisers here using selected clones from his crossings in their own new hybrids, his work will continue to add to the development of cymbidiums well into the future. Now based in Florida, USA, Mr Easton is still making new *Cymbidium* hybrids.

This article is not an attempt to appraise Andrew Easton's hybridising achievements. Rather, it is a review of the seedlings we've flowered from his hybrids which have earned a spot on our benches and, in some cases, a place in our own breeding program. Throughout the 1990's we acquired most of our seedlings from Mr Easton's breeding lines via Kevin

Butler's Ezi-Gro Orchids. In all cases these seedlings were bought in relatively small numbers of each crossing (usually five or six) as opposed to full flasks (our usual method of purchasing seedlings from Bryants Orchids, Foxfire Orchids and others). Smaller numbers of plants from different crosses is probably the way many hobby growers buy their seedlings and is a good way of adding variety to a *Cymbidium* collection and, possibly, picking up the odd above-average plant into the bargain.

Cym. Kirby Lesh 'Aranen'

This cross of (Pink Champagne x Red



Cym. (Huckleberry Mountain x Cora Paddison) 'Pepper'.



Cym. Kirby Lesh 'Aranen' – worth breeding with if the other parents are carefully matched.



Cym. (Huckleberry Mountain x Cora Paddison) 'Flame'.



Cym. Brave Harry 'Lipstick' – a perky intermediate with eye appeal.

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AOR 193



Cym. Black Pearl 'Rounder'.



Cym. (Atlantic Crossing x Autumn Crisp) 'Orange Crush'.

Beauty) has produced a good number of attractive large flower hybrids and a few award quality plants. 'Aranen' is one of two kept from a batch of six we grew on. While not showing the intensity of colour nor the heavy spotting seen in some examples, it has possibly the widest petals and sepals we've seen from this cross. And, while not having the strongest spike of those we flowered, it has enough good traits to warrant its use in hybrids with a little care in selecting complementary partners.

***Cym.* (Huckleberry Mountain x Cora Paddison) 'Flame' and 'Pepper'**

Both these flowers, although visually different, present on vigorous plants with good length spikes. While 'Flame' doesn't have the rounded petal and sepal tips we seem to be obsessed with these days, it is a full, round flower with strong colour and a dramatic lip. 'Flame' is proving to be a fertile parent, but only time will tell on the outcomes. 'Pepper' is a larger flower car-

ried in higher numbers but, while flat, is less shapely in show terms. Unfortunately, it has proven a reluctant breeder so far and may not keep its place in the growing house.

***Cym.* Norwegian Wood 'Aranen' (Pink Champagne x Vogelsang)**

A pretty intermediate which was Victoria's entrant in the 2001 SAGE *Cymbidium* Seedling competition in the Novelty class. A compact-growing plant and a prolific flowerer which we added to our breeding stock after flowering it three years in a row.

***Cym.* (Atlantic Crossing x Autumn Crisp) 'Orange Crush'**

This plant drew some interest at the Ararat *Cymbidium* Festival in 2001 when shown as a first flowering seedling. With a couple of years more growth on the plant it carried 19 120mm blooms on one spike – and is by far the best of those we've flowered from this cross, the others inher-

iting the *Cym.* Atlantic Crossing 'The Globe' limited flower count.

***Cym.* Brave Harry 'Lipstick' (Mistress Mary x Radiant Harry)**

Yes, the shape is unusual, and certainly not show bench material, but this little intermediate attracts attention from across the orchid house. A compact plant with straight spikes, and plenty of them, a good flower count, and pastel pink with a close to true red vee on the lip makes it a plant we're sure plenty of growers would find a spot on the bench for, just as we did.

***Cym.* Black Pearl 'Cascade' and 'Cascade' (Brook Street x Vogelsang)**

Another *Cym.* Vogelsang hybrid with the colour dominated by the proven *Cym.* Brook Street. 'Rounder' is a smaller-growing plant with rather cuppy miniature blooms and will have real potential when it grows up a bit. 'Cascade' is much more influenced in terms of flower by its *Cym.* Brook Street parent and is a more



Cym. Black Pearl 'Cascade'.



Cym. Camouflage Candy 'The Lip'.

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vigorously-growing, heavier-flowering plant. On its second flowering it produced ten spikes with 16-22 flowers on each spike from a six-bulb plant in a seven-inch pot. In both plants spike habit is pendulous, as you would expect from this type of breeding.

Cym. John Gomes 'Aranen Towers' (Radiant Harry x Dolly)

While the flowers on this plant aren't full enough to compare against the best of today's intermediates, they are quite attractive and are produced in large numbers (as high as 34 on a single spike). Spike habit is dominated by the Cym. Radiant Harry parent being a metre of more in length, semi-arching and very strong. Unfortunately, plant size is also dominated by that parent as well, producing quite large bulbs and leaves. We've used it in several crosses where the other parent could reasonably be expected to reduce the plant size in the offspring.

Cym. Camouflage Candy 'The Lip' (Radiant Harry x Red Beauty)

'The Lip' was the best result we got from a group of five seedlings from this cross. The Cym. Red Beauty parent used by Mr Easton was 'Netty' (syn. Rembrandt?). Although flower size was only 100mm or so, it was on a four-bulb first-flowering plant with a metre-plus spike and eighteen flowers. Among the rest of the batch we grew were some nice smooth pinks and some very nice banded lips but, unfortunately, no others with decent shape, or the floriferousness and spike habit of this one – but that's often the way with seedlings.

Cym. Street Tango 'N&R' (Brook Street x Last Tango)

Another of numerous hybrids from Geyserland Orchids based on the Cym. *devonianum* breeding lines. The plants from this cross that we flowered were remarkably consistent in plant growth, spike habit, flower count, shape and colour. 'N&R' was a little better than the rest in just about all areas. From our admittedly limited experience of flowering out six seedlings, there are distinct improvements (at least to our eyes) in this cross when compared to both parents. While the flowers are similar to Cym. Last Tango, the spikes are generally longer and flower counts are greater.

Cym. Mighty Tracey 'Joyce K' (Mighty Mouse x Tracey Reddaway)

Again, not a traditional show-shaped flower, although the segments are very broad – but it's a great-looking flower with its strong yellow colour and heavily red-

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banded labellum. The colour is non-fading and the more light the buds get the more intensely yellow the colour becomes. Not a large flower (95-100mm) but with big decorative spikes reminiscent of its *Cym.* Mighty Mouse parentage and good flower counts, we think it has a lot going for it. While 'Joyce K' has proven to be a reluctant breeder we do have seedlings growing on from a cross with a shapely bright yellow from a Dean Roesler cross, *Cym.* (Hove x Tracey Reddaway). *Cym.* Mighty Tracey 'Joyce K' turned out to be the only seedling we had – perhaps a bonus plant sent with an order but, however it came to us, we're glad to have it.

While we did flower many more seedlings from various Geyserland crosses (and still have more yet to flower), the limited numbers grown did not produce anything we wished to keep from among them. That's not to say they did not produce quality plants, or that those others flowered wouldn't have been considered a great result by someone else. It's just that our interest is primarily in the breeding potential present in a particular plant. Many of the plants we rejected for our purposes went to new homes with friends and workmates as gifts and were gratefully received for their beauty and colour. With the quality of *Cymbidium* breeding available today from experienced hybridisers such as Mr Easton and others, totally disastrous crosses are rare in our experience.

If this snapshot of some of Geyserland's hybrids shows anything, it's that even when buying seedlings in small numbers, desirable cymbidiums can be obtained. Best of luck with your seedlings – wherever or whomever they come from. ■

Rob Smith

**24 William Hunter Court
Rosebud, Victoria 3939**



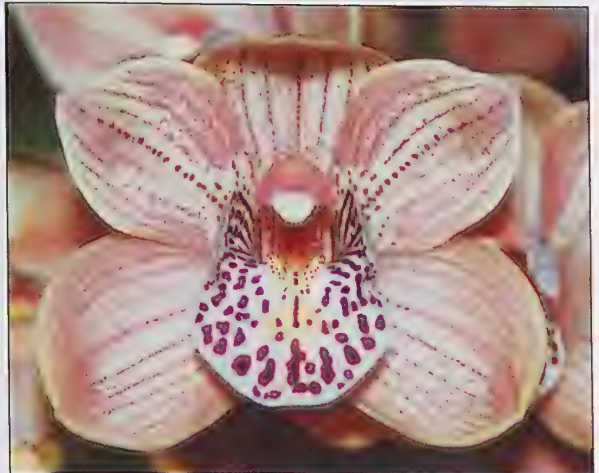
Cym. John Gomes 'Aranen Towers'.



Cym. Street Tango 'N&R'.



Cym. Mighty Tracey 'Joyce K'.



Cym. Norwegian Wood 'Aranen'.

The 2004 Ararat/COSV Cymbidium Festival – Show of Champions

Text and photography by Rob Smith



Cym. Doo Wop – a fine, floriferous intermediate type *Cymbidium* grown by Jan & Andy Leamon of Narre Warren, Victoria.



Cym. Kirby Lesh 'Pink Ice' – a show-winning, awarded large flower type grown by Kimberley Orchids of Devon Meadows, Victoria.

From the 11th to the 12th of September the Cymbidium Orchid Society of Victoria Inc., in conjunction with Ararat Rural City is staging the annual Cymbidium Orchid Festival.

This year will see some significant changes to the show schedule with the inclusion of a new and complete class – Small Standard Type Flower – in line with the Australian Cymbidium Society's schedule for the 2004 National Cymbidium Show at Warwick Farm in New South Wales. In addition, there will be no Grand or Reserve Champions at the 2004 Ararat/COSV Festival. Instead, champions will be awarded across each of the four size classes and also for seedlings, specimens, and etcetera.

The idea of not selecting an overall champion of the show certainly goes against the traditional approach to *Cymbidium* shows in general and, while numerous people might have thought about the possibility from time to time, it took Peter Sunderland of Kimberley Orchids to push the idea for serious consideration. Considering Kimberley Orchids' well-deserved record of major

show wins they, among all *Cymbidium* exhibitors, probably had the most to lose from such a move and deserve recognition for this unselfish approach. Perhaps surprisingly (but perhaps not for a club which works to be progressive and to provide maximum benefit to its members), the idea was enthusiastically embraced by the committee and was adopted for the 2004 season.

Whether the change will be accepted and approved by exhibitors remains to be seen, although the feedback to this point has been largely positive.

For those who may be asking why the change has been made, we can only point to the reasons, which came up when the possibility was discussed. Selecting a "best of" from a very large group of widely varying sizes and types of cymbidiums is often an unsatisfactory process. At major shows such as the Ararat/COSV Festival large numbers of quality plants from some of the nation's best commercial and hobby growers are massed in one place. This is a show where there often aren't just a couple of standout plants which obviously eclipse

the other exhibits in the hall.

How then is a decision reached comparing, for example, a beautifully grown and presented well-known show bench large flower with one massive spike against, perhaps, a specimen miniature with its pot curtained in evenly-displayed pendant racemes, an exciting new seedling with obvious potential but only on its first flowering, or an outstanding variety of a superbly grown species? The decision probably becomes as arbitrary as a "feeling" or a degree of personal preference from the judges concerned and influencing their final choice. The comparison of apples against oranges is rarely satisfactory for the exhibitors, the judges, or the spectators, although it must be said that the popularity (or lack of it) in the judges' decisions was not a factor in the COSV decision. Rather, it is hoped that the change will be seen as a commonsense approach, will be popular, and will promote enthusiastic competition.

Rob Smith

24 William Hunter Court
Rosebud, Victoria 3939

“Little Aussie Beauties”

A look at *Cymbidium suave* hybrids

Part 8

By Dean Roesler

In October 1996 a letter was received advising me I had become the legatee of the Dr Miles Seton *Cym. suave* collection. However, due to health problems Mary and I were unable to make the trip back to Bermagui to collect these plants until May

1997. It was not a large collection as some might have imagined, however, such was my relationship with Miles that I felt it very important to keep as many of this group of plants together as possible. This trip saw many emotions surface. Sadness,

because I was returning to ‘Nerimbah’ and Miles would not be there ... happiness, to be returning to collect the *Cym. suave* hybrids that had given Miles and I a special bond ... disappointment, that some of these plants had disappeared since my last visit.

So far during this series of articles we have looked at just four *Cym. suave* hybrids – the *Cym. Koalas*, *Cym. Piccaninnys*, *Cym. Jumbucks* and *Cym. Bunyips*. These were the most prominent amongst the collection. Other *Cym. suave* crosses made by Miles produced only a handful of plants and in some cases none of a particular grex were found when we went back to Bermagui to collect them! Let us now take a look at some of the other crosses.

Interesting observations from the Hybrid Chart

Cym. suave is a relatively new kid on the block when it comes to breeding, with the first hybrid registration appearing from it in 1969. It is interesting to note that six of the registered crossings are primary hybrids. Only five of the crosses have *Cym. suave* as the pod parent, while it appears that in all the *Cym. suave* crosses the parents used have each been diploids.

Cym. Scallywag ‘Little Rippa’ HCC-CC/OSCOV (*pumilum* x *suave*)

The first *Cym. suave* cross was made by English hybridiser Keith Andrew, who is more famous and well remembered for his crossing of *Cym.* (Western Rose x *devonianum*) that produced the *Cym. Bulbarrows* which in turn heralded an explosion of *Cym. devonianum* crosses from the mid 1970s to this present time. *Cym. Scallywag* was an obvious cross to be made, for it combined two of the smallest of the *Cymbidium* species, assuring petite miniature flowers produced in abundance. And although the cross has certainly been repeated here in Australia in more recent times, all credit must go to Keith for his initial foresight. In October 2003 *Cym. Scallywag* ‘Little Rippa’ owned by Phil Grech was awarded a Highly Commended Certificate and a Cultural Certificate by the Orchid Societies Council of Victoria. The plant carried 30 spikes with an aver-



Cym. Sunburst Finish ‘Houston Street’ CC, HCC-CC/OSCOV

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Cym. suave Registrations to December 2003

(in registered alphabetical order)

<i>Cym. Bunyip</i> [Carisona x <i>suave</i>]	M Seton 1986
<i>Cym. Dean Roesler</i> [Brown Eyes x <i>suave</i>]	M Seton 1996
<i>Cym. Dimples</i> [Dag x <i>suave</i>]	G Cole 2001
<i>Cym. Dreamtime</i> [Sabre Dance x <i>suave</i>]	M Seton 1994
<i>Cym. Evonne</i> [Esmeralda x <i>suave</i>]	W Cannons 1973
<i>Cym. James Webeck</i> [<i>suave</i> x <i>canaliculatum</i>]	E Webeck 1989
<i>Cym. Jumbuck</i> [<i>suave</i> x <i>Negrilo</i>]	M Seton 1989
<i>Cym. Kevin Ragen</i> [eburneum x <i>suave</i>]	H Boyd 1976
<i>Cym. Koala</i> [Fiona x <i>suave</i>]	M Seton 1993
<i>Cym. Kuranda</i> [madidum x <i>suave</i>]	Greenoakes 1972
<i>Cym. Oz</i> [Oiso x <i>suave</i>]	M Seton 1989
<i>Cym. Piccaninny</i> [<i>suave</i> x <i>Tethys</i>]	M Seton 1983
<i>Cym. Princess of Wales</i> [Showgirl x <i>suave</i>]	M Seton 1994
<i>Cym. Scallywag</i> [pumilum x <i>suave</i>]	K Andrew 1969
<i>Cym. Silicon Chip</i> [finlaysonianum x <i>suave</i>]	M Seton 1987
<i>Cym. Sunburst Finish</i> [<i>suave</i> x <i>Voodoo</i>]	P Gomes 1992
<i>Cym. Sweet Devon</i> [<i>suave</i> x <i>devonianum</i>]	D Cannon 1982
<i>Cym. Tennis</i> [Cricket x <i>suave</i>]	M Seton 1995
<i>Cym. Val Peck</i> [Len Southward x <i>suave</i>]	Geyslerland 1992
<i>Cym. Wallaby</i> [King Arthur x <i>suave</i>]	M Seton 1993

Buckingham Palace. Shortly after, acceptance of the name was received, however, not long after a letter arrived from the Palace to say that her Majesty the Queen had decided that the name should be changed to *Cym. Princess of Wales*. A letter from the RHS registrar confirmed these events and brought an end to one of the longest registration applications of all time.

'Diana' was the only *Cym. Princess of Wales* I ever saw at 'Nerimbah'. It appealed to me because of its triangular shape with its dorsal sepal standing upright giving the flower what I call a "pixie type" appearance. The buff coloured flowers and lip were highlighted by extremely dark side-lobes extending to the base of the lip. Sadly it was one of the plants that went missing.

Cym. Sweet Devon '1103' CE/CCSA
(*suave* x *devonianum*)

This is one of the best known and widely distributed of the primary hybrid *Cym. suave* crosses, possibly because it has been done by a number of hybridisers. D Cannon from Mitcham, Victoria, first registered the cross in 1982. Miles Seton also made the cross and numerous plants were flowered by him. As with many of the primary hybrid crosses very little variation is to be found in the seedlings. Occasionally a better form will be flowered, or slight colour changes occur, however, on the whole there are only minor differences. I find their colour not particularly attractive. Apart from having a more compact foliage the *Cym. Sweet Devons* are not unlike the *Cym. Crickets*, in which *Cym. devonianum* was crossed with *Cym. madidum*. The most pleasing aspect of

age of 20 flowers per spike and made a superb display on a well cultured plant.

Cym. Princess of Wales 'Diana'
(Showgirl x *suave*)

I recall arriving at 'Nerimbah' on our third visit to find an agitated Miles telling me that his plant of *Cym. Princess of Wales 'Diana'* was missing and that he thought it must have been stolen. I knew from the previous visit how much the plant meant to him and so I immediately searched the orchid houses thoroughly. Much to my relief as well as his I found the plant in a completely different place to where it had

been in the past. It was flowering better than ever before and its safe return brought much joy to Miles.

Using *Cym. Showgirl 'Marion Miller'* as the pod parent Miles made the cross and when it flowered decided to register it as *Cym. Princess Diana*. He wrote to Princess Diana, and through her secretary was told he would need to proceed through the Governor General of Australia. He followed these instructions, but when he had heard nothing after several months, he decided to send off his registration application to the RHS with a request that the registrar first confirm the name with



Cym. Princess Of Wales 'Diana'



Cym. Sweet Devon '1103' CE/CCSA



A dramatic example of the colour variation seen from two different flowerings of *Cym. Evonne* 'Noe's'.



Cym. Scallywag 'Little Rippa' HCC-CC/OSCOV



Cym. Scallywag 'The Crumpet'



Cym. Dimples 'Shirley Temple'

these crosses are the extremely free flowering properties combined with tiny flowers with almost solid black lips on long pendulous spikes. *Cym. Sweet Devon* '1103' owned by Keith Northcote was granted a commendation for excellence by the *Cymbidium* Club of South Australia.

***Cym. Evonne 'Noe's'* (Esmeralda x suave)**

In earlier editions of this series, I drew attention to the dramatic colour variations to be seen in many of the *Cym. suave* hybrids, due to light conditions. None surprised me more than when I flowered and photographed a plant of *Cym. Evonne 'Noe's'* given to me by good friends Rob and Noe Smith, and then compared it to a picture of the same *Cymbidium* on page 57 of the April/May 2002 AOR in an article they had written called The Potential of the Australian *Cymbidium* Species. Pictures of the two are included for you to see.

***Cym. Sunburst Finish 'Houston Street'* (suave x Voodoo) CC, HCC/OSCOV**

Cym. Sunburst Finish 'Houston Street' owned by John and Sue Day of Stawell, Victoria made an impressive sight the year it won Grand Champion of the 1999 Ararat Orchid Society Show. The plant carried 37 pendulous spikes evenly spaced around it and held approximately 1295 flowers. Apart from having longer spikes and bigger plant growth it was not unlike the *Cym. Sweet Devons* in appearance. *Cym. Sunburst Finish 'Houston Street'* was granted two awards by judges from the Orchid Societies Council Of Victorian – a Highly Commended Certificate (HCC) as well as an award for its outstanding culture (CC).

***Cym. Dimples 'Shirley Temple'* (Dag x suave)**

Grant Cole from California, USA has more than a passing interest in this line of breeding. Having spent a week with Miles Seton gave Grant the opportunity to study this fascinating Australian *Cymbidium* in its natural environment. Grant has been a little more successful in his endeavours to hybridise with *Cym. suave* than most others and has a number of crosses from *Cym. suave* that should flower in the next few years. In particular, a cross with *Cym. Sarah Jean 'Ice Cascade'* should be most interesting. He tells me that *Cym. Dimples* his first cross to bloom was somewhat disappointing – lacking variation and being rather shy flowering.

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AOR177

NEW CYMBIDIUM MERICLONES

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- B. *Cym. Del's Delight 'Buttercup'* – yellow int
- C. *Cym. Little Ruby 'Profusion'* – red int
- D. *Cym. May's Delight 'Green Opal' 4N* – green standard
- E. *Cym. Paddy Mouse 'Lemon'* – yellow standard
- F. *Cym. (Parish Jewel x Wallara) 'Teen'* – yellow mini
- G. *Cym. Pebbles 'Cherry Delight'* – pink standard
- H. *Cym. Rainbow Warrior 'Full Of Life'* – polychrome int
- I. *Cym. Sister Miller 'Eureka'* – white standard
- J. *Cym. Sylvan Beach 'Darwin Puff'* – pink standard
- K. *Cym. (Tom Thumb x Kiwi Magic) 'Waikanae Jade' 4N* – green int
- L. *Cym. (Tracey Reddaway x Coraki) 'White Gold' 4N* – yellow standard
- M. *Cym. Uncle Everett 'Dark Red'* – red int
- N. *Cym. (Wondrous x Red Beauty) 'Full Cream'* – cream standard
- O. *Cym. Yellow River 'White Angel' 4N* – white standard



Cym. CHELSEY ELISE 'JOY'

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AOR185

The Dutch Connection

By W C Evertse

The first European to land on Australian soil was Willem Janzoon. This Dutch sea captain was sailing under the command of the "Verenigde Oostindische Compagnie" to explore the south coast of New Guinea. In those days the VOC were always searching for new lands and new places to trade with. In the ship "Duyfken" Captain Janzoon and his crew sailed south-east beyond Papua New Guinea and discovered a new land which he named New Holland, later named Australia. Captain Janzoon's landing took place in the year 1606. In the four centuries since that first landing many Dutch people and companies have found their way to Australia, to trade and to settle, with many Dutch people making Australia their permanent home.

The world has changed dramatically in those four centuries since Willem Janzoon landed in a new and unknown land. During the last decade of the twentieth century, Leon Van Rijn of Fleurijn Orchids-Holland has visited Australia many times to search for new *Cymbidium* orchids. Initially, Leon had planned to visit several nurseries in North America but, at the last moment, changed his travel plans and came 'down under'. Over the years since his first visit Leon has built up many friendships and commercial contacts in Australia and has become Patron of the *Cymbidium* Club of South Australia, and a naming rights sponsor of the National *Cymbidium* Show in 2002, 2003 and 2004, all of which he sees as a great honour.

Leon is always seeking new *Cymbidium* varieties with commercial potential and orchid companies, growers, and hybridisers, to trade with. In his homeland of The

Netherlands he is active in the orchid trade through his nursery Fleurijn Orchids-Holland and has a strong interest in the development of new *Cymbidium* hybrids. During the past six years many of his *Cymbidium* orchids have been propagated by meristem culture in my laboratory, Lowland-Biotech, a laboratory active in the breeding, selection and propagation in-vitro, of many orchids including cymbidiums, paphiopedilums and phalaenopsis as well as

frost-resistant cypripediums, dactylorhizas and epipactis. To continue development, breeding and commercial trade into the future, Fleurijn Orchids-Holland has begun an active participation with Lowland-Biotech's laboratory commencing this year.

Lowland-Biotech, was founded in 1986 and in the early years the majority of the work done was in the propagation of phalaenopsis. In those days, many laboratories were trying to propagate phalaenopsis by



Line-bred Phalaenopsis. *Phal. romantique*



Line-bred Phalaenopsis. *Phal. lowland Magic*

Cymbidium Show Dates for 2004

8th July

CCA(NSW) – Winter Show
Lakemba Remembrance Hall
220 Lakemba Street, Lakemba NSW

6th-8th August

CCA(NSW) – National Cymbidium Show
Sunnybrook Hotel & Convention Centre
355 Hume Highway, Warwick Farm NSW

14th-15th August

COCWA – Annual Show
Belmont Sports & Recreation Club
Abenethy Road, Belmont WA

22nd-28th August

CCSA – Spring Show
Westlake Shopping Centre
Westlake Boulevard, Westlake SA

9th September

CCA(NSW) – Spring Show
Lakemba Remembrance Hall
Lakemba Street, Lakemba NSW

11th-12th September

COSV – Cymbidium Festival
Town Hall
Barkly Street, Ararat VIC

4th-10th October

COSV – Spring Show
The Glen Shopping Centre
Springvale Road, Glen Waverley VIC

Correction

The editors offer their apologies for the incorrect size measurements in relation to Miniature and Intermediate types as published in the article "Why a Fourth Size Class for Cymbidiums?" – Volume 69, No. 2, April/May Issue, page 44.

Of course the upper limit of Miniatures should have read 60mm (not 65mm) and, therefore, the size range of Intermediates should have read as 60mm-86mm (not 65mm-85mm).

Trusting this clarifies any confusion that may have been caused, and our thanks to the observant few who drew the mistake to our attention. ■



Willem Evertse

meristem culture but, unlike cymbidiums, phalaenopsis are difficult to propagate and the labour necessary was high making the process very expensive in a highly developed country like The Netherlands. In answer to these problems I began to work on developing inbreeding lines of phalaenopsis in 1986 which resulted in homozygotic F1 hybrids after 18 years of work. With the most difficult work done, I was searching for a new challenge and it was then that I came in contact with Leon and Wim Van Rijn, the owners of Fleurijn Orchids-Holland and producers of cut flower cymbidiums. As a keen hybridiser, this was a new challenge for me and what I saw as the opportunity to get rid of "a lot of genetic ballast" in cymbidiums that has resulted from more than 100 years of, often, non-systematic breeding within the genus. To this aim I am looking to Fleurijn Orchids-Holland's associated Australian laboratories and nurseries to grow seedlings to flowering size. Australia is an ideal country to grow seedlings in large quantities without the high cost of heating glass houses, etcetera, as is necessary in Holland.

In regard to the production of quality standard/large flower size cut flower cymbidiums, I regard only three species as being of major genetic importance and horticultural interest – these are *Cym. insigne* for white, rose and red colours and erect flower stems, *Cym. lowianum* for yellow, and *Cym. hookerianum* (*Syn. grandiflorum*) for greens. I regard the following of lesser importance – *Cym. eburneum* for its influence on flower size and upright stems, *Cym. erythrostylum* for its bright white colour, *Cym. parishii* for its influence in higher flowering temperatures, and, *Cym. iridoides* (*Syn. giganteum*) and *Cym. tracyanum* for their influence in producing red and striped flowers. For successful breeding it is important to find a balance between the

good and bad genetic qualities each species will have. Because this is the one important genetic rule in orchid breeding, the process is not difficult or problematic, but it may take up a large part of your life!

As a member of the Fleurijn Orchids group, and in the tradition and philosophy of Fleurijn Orchids-Holland, Lowland-Biotech will support associated laboratories in Australia with information and new plants. We hope an interchange of information and *Cymbidium* plants will develop which will benefit all concerned as no person or business can know everything there is to know. In contrast to the approach of many other Dutch orchid companies, we believe that that "for nothing you will get nothing"

and see mutual development and reward as the way to go and I explain our approach in this way – in the heraldic warpen of The Netherlands you will see a lion holding seven arrows together. These seven arrows represent the earliest seven states of The Netherlands. The significance of the bundle of seven arrows is that while you can break an arrow on its own, a bundle of seven together can't be broken. That is why cooperation is the keyword in traditional Dutch trade and why Fleurijn Orchids-Holland and Lowland-Biotech see that approach as being so important.

W C Evertse

Lowland-Biotech Laboratory

The Netherlands

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- * A2 WINTER VALLEY 'EYE CATCHER' (4N) HCC/AOC (2003). Received its award just recently. A winter flowering showbench pink (Intermediate) with a bold red lip, upright spiking. Clones \$20 each, two for \$35 or three for \$45. Larger orders welcome. FLASKS NOW AVAILABLE FOR IMMEDIATE DELIVERY @\$85 EACH FOR 25 PLANTS.
- * A3 STRATH MEADOWS 'TWO TONE' (4N). An award quality white with crimson overtone with a bright bold eye catching labellum. Upright spikes are produced from late June to August. Good show pot plant and breeder. Clones @\$15 each or two for \$25 (limited). (Standard Cym.)
- * A4 STRATH BEAUTY 'JULIANNE' (4N). An award quality green, with the most wide and bold labellum that I have seen. Upright spikes are produced in August. A **very limited number of clones** will be released from the original plant @\$25 each. A top breeder and some of her offspring should flower in 2004-2005. (Standard Cym.)
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AOM182

South Australia's Cymbidium of The Year 2003

Text by Dean Roesler – Photography by John Seidel



Cym. Anna Szabo 'Geyserland'



Cym. Anna Szabo 'Geyserland'

Members of the Cymbidium Club of South Australia chose their Cymbidium of The Year for 2003 at the February 2004 meeting of the club. The Judging Panel presented a selection of 17 orchids and after two elimination rounds the three finalists were, *Cym. Ruby Valley 'Clare'* owned by Moss and Rosemary Bray, *Cym. Anna Szabo 'Geyserland'* owned by Colin and Nan Grigg and *Cym. (Tracey Reddaway x Kelly's Winter)* also owned by Moss and Rosemary Bray.

Cym. Anna Szabo 'Geyserland'
AM/AOC

South Australia's Cymbidium of The Year 2003

This delightful, small white standard

displayed five upright spikes carrying 54 flowers and was beautifully presented by its owners Colin and Nan Grigg. It demonstrated that big is not always the prime requisite to win! *Cym. Anna Szabo* was registered in 1993 by Alex Szabo from a crossing made by Geyserland Orchids using the parents *Cym. Rod Stewart* crossed with *Cym. Hazel Tyers*.

Prior to being shown at the September meeting of the Cymbidium Club of South Australia, Colin and Nan exhibited their plant of *Cym. Anna Szabo 'Geyserland'* in

the 16th Australian Orchid Conference Show hosted by the Orchid Club of South Australia and held at the Wayville Showgrounds. It ultimately won Champion Cymbidium of the Conference and then went on to receive an Award of Merit with a total of 80.0 points from the Australian Orchid Council judges.

Congratulations go to Colin and Nan for a worthy winner indeed.

Dean Roesler
20 Lawson Road
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2004 CYMBIDIUM CATALOGUE



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Email: nado@iinet.net.au
Phone, email or write for your copy
Prop: Nado Lenkic

AOR 156



Cym. (Tracey Reddaway x Kelly's Winter)



Cym. Ruby Valley 'Clare'

SHOWDATES				
DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
New South Wales				
10 June	10.00am-4.00pm	Winter	Nambucca Valley	Literary Institute Hall
11 June	9.00am-4.00pm			Bowa Street
12 June	9.00am-3.00pm			Urunga
12-13 June	10.00am-4.00pm	Winter	Camden Haven	Laurieton United Servicemen's Club Seymour Street, Laurieton
14-20 June	Shopping Centre Hours	Winter	OSNSW	St. Ives Shopping Village Mona Vale Road, St. Ives
16-19 June	Mall Hours	Winter	South Coast	Corrimal Park Mall, Princes Highway, Corrimal
17-19 June	Shopping Centre Hours to 1.00pm Saturday	Winter	Maitland & Coalfield District	Raymond Terrace Market Place
17-19 June 20 June	9.00am-5.00pm 9.00am-5.00pm	Winter	Sutherland Shire	Swane's Nursery 80 Port Hacking Road, Sylvania
22-26 June	Shopping Centre Hours	Winter	Leisure Coast	Westfield Shoppingtown, Cnr. Princes Highway, Figtree
24-26 June	Shopping Centre Hours	Winter	Far Nth Coast District Orchid Council	Lismore Shopping Square, Lismore
30 June- 3 July	Shopping Centre Hours	Winter	Cumberland Orchid Circle	Westfield Shoppingtown North Rocks
2-4 July	9.00am-4.00pm	Winter	Gosford & District (Gosford Orchid Spectacular)	Gosford Racecourse Cnr. Pacific Highway & Racecourse Road, Gosford
3 July 4 July	12 noon-4.00pm 9.00am-4.00pm	Winter	Shoalhaven	Masonic Hall, Berry Showground Cnr. Victoria & Albany Streets, Berry
8-10 July	Shopping Centre Hours	Winter	Campbelltown & District	Macarthur Square Shopping Centre, Gilchrist Drive, Ambervale
8-11 July	Shopping Centre Hours	Winter	Campbelltown & District	Macarthur Square Shopping Centre Gilchrist Drive, Ambarvale
10 July	9.00am-1.30pm	Winter	Southern Riviera	Anglican Church Hall Cnr. Church Street & Princes Highway, Milton
15-17 July	Shopping Centre Hours	Winter	Blue Mountains & Penrith Districts	Fountain Court Penrith Plaza Shopping Complex, Penrith
15-17 July	Shopping Centre Hours	Winter	Eastwood & District Orchid Circle	Eastwood Shopping Centre, Rowe Street, Eastwood
15-17 July	Shopping Centre Hours to 4.00pm Saturday	Winter	North Shore	The Garden Centre 802-808 Pacific Highway, Gordon
21-25 July	Shopping Centre Hours	Winter	Central Coast & Hunter Region	Lake Haven Shopping Centre, Lake Haven
22-24 July	Shopping Centre Hours to 1.00pm Saturday	Winter	Maitland & Coalfields District	Cessnock Plaza Cessnock
29-31 July	Shopping Centre Hours	Winter	Hawkesbury District	Richmond Market Place, March Street, Richmond
23 July 24 July	9.00am-5.00pm 9.00am-3.00pm	Winter	Eurobodalla Orchid Club	CWA Hall Queen Street, Moruya
24-25 July	9.00am-4.00pm	Winter	Illawarra District	96 Market Street, Wollongong
3-7 August	Shopping Centre Hours	Winter	Fairfield District	Stockland Mall, Wetherill Park
3-7 August	Shopping Centre Hours	Winter	Leisure Coast	Westfield Shoppingtown, King Street, Warrawong
5-8 August	Shopping Centre Hours	Winter	Campbelltown & District	Narellan Town Centre, Narellan
13-14 August 15 August	9.00am-4.00pm 9.00am-3.00pm	Winter (St. Ives Orchid Fair)	A.N.O.S. Warringah Group Warringah, North Shore	St. Ives Showground Mona Vale Road, St. Ives
19-22 August	Shopping Centre Hours	Spring	Central Coast & Hunter Region Cymbidium	Lake Macquarie Fair Mt. Hutton
19-22 August	Shopping Centre Hours	Winter	Western Suburbs	Ashfield Mall Shopping Centre, Liverpool Road, Ashfield
20-21 August 22 August	9.00am-5.00pm 9.00am-1.00pm	Winter	Sapphire Coast Orchid Club	Twyford Hall Merimbula
21 August	10.00am-4.30pm	Spring (Ann. Show)	Bellinger Valley	Uniting Church Hall, Hyde Street, Bellingen
22-28 August	Shopping Centre Hours	Spring	Fairfield District	Stockland Mall, Wetherill Park
23-25 August	Shopping Centre Hours	Spring	Macleay Valley	The Credit Union Plaza, Kempsey
25-28 August	Shopping Hours	Spring	South Coast	Corrimal Park Mall, Princes Highway, Corrimal
26-27 August	8.30am-5.30pm	Spring	Tweed District	Tweed City Shopping Centre, Tweed Heads South
Queensland				
11 June 12-13 June	7.00pm-11.00pm 9.00am-11.00pm	Winter (Conference)	Tropical Qld. Orchid Council. Hosted by Ayr & Districts	Ayr Showgrounds Bruce Highway, Ayr
12 June 13 June 14 June	9.00am-8.00pm 9.00am-5.00pm 9.00am-2.30pm	Winter (Combined Orchid Fest)	Sub-tropical Orchid Council Qld. Hosted by Nambour & Gympie Orchid Societies, Noosa Orchid & Foliage Society	Nambour RSL, Willows Function Rooms Mathew Street, Nambour
18 June 19 June 20 June	9.00am-6.00pm 8.00am-5.00pm 9.00am-4.30pm	Winter	Townsville	Townsville Orchid Society Hall Pioneer park, Kirwan
2-3 July 4 July	9.00am-5.00pm 9.00am-3.00pm	Winter (Annual Show)	Caboolture	Memorial Hall, King Street Caboolture (opp. K-Mart)
2-4 July	8.00am-4.00pm	Winter	North Moreton Qld. Orchid Council	Auditorium, Botanic Gardens, Mt. Coot-tha
5 July 6 July	8.00am-10.00pm 8.00am-4.00pm	Winter	Atherton Tablelands	Atherton Show Merrilans, Robert Street, Atherton
15-16 July	Show times	Winter (Ann. Show)	Innisfail	Innisfail Show, Innisfail
17-18 July	9.00am-4.00pm	Winter	John Oxley District	Auditorium, Botanic Gardens, Mt. Coot-tha

SHOWDATES

DATE	TIME	SEASON	ORCHID SOCIETY	SHOW ADDRESS
30 July	10.00am-10.00pm	Winter	Tully & District	Tully Show
31 August	10.00am-3.00pm			Tully Showgrounds, Tully
6-7 August	8.30am-5.00pm	Winter	Darling Downs Orchid Assoc. Combined with Toowoomba & Native of Toowoomba	Walsh's Seeds & Gardens 881 Ruthven Street, Toowoomba
6-7 August	9.00am-5.00pm	Winter	Maroochydore	Millwell Community Hall
8 August	9.00am-3.00pm	(Annual Show)		Millwell Road, Maroochydore
12 August	Shopping Centre Hours	Winter	Gladstone Orchid & Foliage Society	Valley Shopping Centre, Goondoon Street, Gladstone
21 August	9.00am-4.00pm	Spring	North Brisbane	Auditorium
22 August	9.00am-4.00pm			Botanic Gardens, Mt. Coot-tha
26-28 August	Showtimes	Spring	Gold Coast	Gold Coast Show, Jupiters Pavillion, Parklands Showground Parklands Drive, Southport
26-27 August	8.00am-9.00pm	Spring	Pine Rivers	Deception Bay Shopping Centre
28 August	8.00am-4.00pm			Deception Bay
27 August	8.30am-5.00pm	Spring	Noosa District Orchid & Foliage	RSL Memorial Hall
28 August	8.30am-3.30pm			Maple Street, Cooroy
28 August	8.30am-4.00pm	Spring	Ipswich	Bundamba State School Hall
29 August	8.30am-2.00pm			Brisbane Road, Bundamba
28 August	8.30am-4.00pm	Spring	Logan & District	Centre Shopping Mall
29 August	8.30am-3.00pm			Cnr. Fitzgerald Avenue & Pacific Highway, Springwood
28-29 August	9.00am-4.00pm	Spring	Orchid Species	Auditorium, Botanic Gardens, Mt. Coot-tha
28-29 August	9.00am-4.00pm	Spring (Native species & Hybrid)	ANOS (Kabi Group)	Lions Hall, Lawnton Showgrounds Gympie Road, Lawnton
Victoria				
12 June	9.00am-5.00pm	Winter	Melbourne Eastern	East Burwood Uniting Church Community Hall
13 June	12.30pm-5.00pm			Cnr. Burwood Highway & Blackburn Road
14 June	9.00am-4.30pm			East Burwood
3-4 July	9.00am-5.00pm	Winter	Maribyrnong	Maribyrnong Community Centre, Randall Street Maribyrnong
10 July	9.30am-5.00pm	Winter	Ringwood	Selby Primary School Hall
11 July	10.00am-4.00pm			Morley Road, Selby
10-11 July	9.30am-4.30pm	Winter	Victorian Orchid Club	Red Cross Centre Repatriation Hospital Entry 8, Waterdale Road, Heidelberg
16-17 July	9.00am-5.00pm	Winter	Sunraysia Orchid Club	The Plantation
18 July	9.00am-4.00pm			Cnr. Fifteenth Street & Benetook Avenue, Mildura
17 July	12 noon-5.00pm	Winter	Horsham & District	Sports & Community Club, 179 Ballie Street, Horsham
17 July	10.30am-5.00pm	Winter	Yarra Valley	B&T Ferns & Orchids
18 July	9.00am-4.00pm			30 Wiseman Street, Silvan
24-25 July	9.00am-4.30pm	Winter	Warrigal	St. Sava Community Hall
				212 Diamond Creek Road, Greensborough
6 August	7.00pm-10.00pm	Winter	Stawell	Uniting Church Hall
7 August	9.30am-4.00pm			Scallan Street, Stawell
7-8 August	10.00am-4.30pm	Winter	Geelong Orchid & Indoor Plant	Vines Road Community Centre 49 Vines Road, Club Hamlyn Heights
South Australia				
9th July	12 noon-5.00pm	Winter	Murray Bridge & Districts Orchid Club	Town Hall
10-11 July	10.00am-4.00pm			Bridge Street, Murray Bridge
16 July	10.00am-4.00pm	Winter	Pt. Augusta Orchid Club	TBA
17 July	10.00am-2.00pm			
21-26 July	Shopping Centre Hours	Winter	Orchid Club of SA	Golden Grove Shopping Centre, The Golden Way, Golden Grove
21-24 July	Shopping Centre Hours	Winter	Whyalla Orchid Club	Westland Shopping Centre, Nicholson Avenue, Whyalla
25-31 July	Shopping Centre Hours	Winter	Gawler District Orchid Club	Holly Wood Plaza, Spains Road, Salisbury Downs
9-14 August	Shopping Centre Hours	Winter (Festival of Living Colour)	Northern & Eastern Adelaide Districts	Modbury Triangle, Shopping Centre North East Road, Modbury
23-28 August	Shopping Centre Hours	Spring (Orchids with Flare)	Northern & Eastern	Northpark Shopping Centre Main North Road, Prospect
Western Australia				
22-24 July	Shopping Centre Hours	Winter	Peel Region of WA	Warnbro Fair Shopping Centre, Warnbro
29-31 July	Shopping Centre Hours to 1.00pm Saturday	Winter	Albany	North Road Shopping Complex Albany
29-31 July	8.30am-5.30pm	Winter	Bunbury	Bunbury Forum, Bunbury
14 August	1.00pm-6.00pm	Winter	Cymbidium Orchid Club of WA	Belmont Sports & Recreation Club
15 August	9.00am-5.00pm			Cnr. Keane Street & Abernethy Road, Belmont
26-28 August	Shopping Centre Hours	Winter	Wanneroo	Joondalup Shopping Centre, Joondalup
Northern Territory				
12-13 June	9.00am-5.00pm	Winter (Dry Season)	Litchfield Orchid Club	Mararra Indoor Stadium, Darwin
New Zealand				
27 August	10.00am-4.30pm	Spring	Capital City	Tawa Salvation Army Hall
28 August	10.00am-4.00pm			175 Main Road, Tawa, Wellington

Australian Orchid Review

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the Australian Cymbidium Society.

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June 12-14 STQOC Orchid Conference - Nambour, Qld
June 19-20 Orchid Fair at Mingara - Tumby Umbi, NSW
July 2-4 Gosford Orchid Spectacular - Gosford Racecourse, NSW
July 3-4 Victorian Orchid Challenge - Ararat, Vic
July 11 Tinonee Orchids Open Day and Show - Tinonee, NSW
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August 20-22 Melbourne International Orchid Show - Collectors Corner, Vic
September 2-5 ABC Gardening Australia Live - Sydney Showground, Homebush, NSW
September 9-12 Australian Springtime Floral Festival - Mt. Penang, NSW
September 16-19 ANOS Conference & Show - Campbelltown, NSW
October 10 Hills District Orchids Open Day - Northmead, NSW
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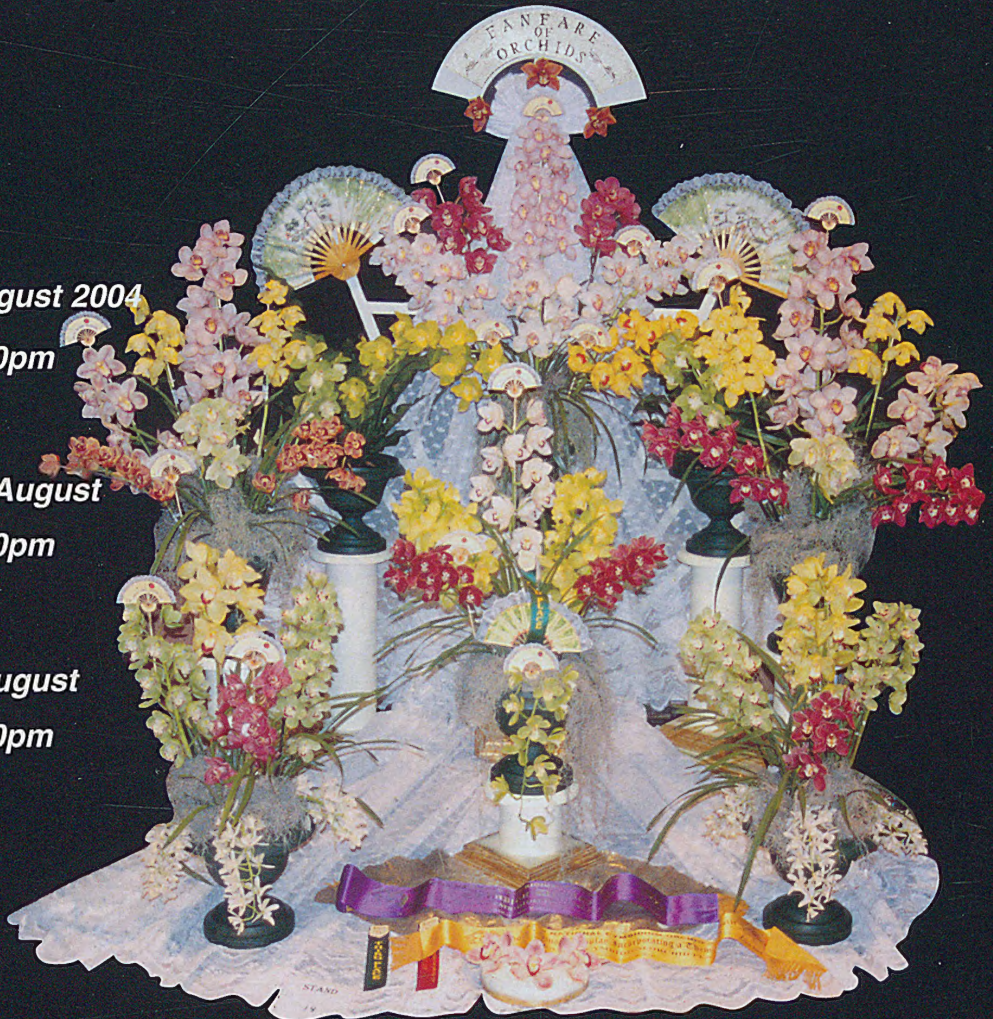
9.00am to 5.00pm

Saturday 7th August

9.00am to 5.00pm

Sunday 8th August

9.00am to 4.00pm



**Venue; The Sunnybrook Hotel & Convention Centre
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